

CHAPTER 6 Alternatives to the Proposed Project

The following discussion evaluates alternatives to the proposed project and examines the potential environmental impacts associated with each alternative. Through comparison of these alternatives to the proposed project, the relative environmental advantages and disadvantages of each are weighed and analyzed. The *California Environmental Quality Act* (CEQA) Guidelines require that the range of alternatives addressed in an EIR be governed by a rule of reason. Not every conceivable alternative must be addressed, nor do infeasible alternatives need to be considered (CEQA Guidelines Section 15126.6). Section 15126.6 of the CEQA Guidelines states that the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, other plans or regulatory limitations, and jurisdictional boundaries. The discussion of alternatives must focus on alternatives capable of either avoiding or substantially lessening any significant environmental effects of the project, even if the alternative would impede, to some degree, the attainment of the project objectives or would be more costly. The alternatives discussion should not consider alternatives whose implementation is remote or speculative, and the analysis need not be presented in the same level of detail as the assessment of the project.

6.1 ALTERNATIVES TO THE PROJECT

To identify reasonable alternatives to The Village at Bell Terra Project, the City, as Lead Agency, considered the objectives of the proposed project. The objectives of the proposed project are as follows:

The objectives of the proposed project, as identified by the City, are as follows:

- Implement the policies and development standards of the City General Plan and The Crossings Specific Plan.
- Assist in the implementation of the Redevelopment Plan.
- Enhance the Edinger Corridor as a destination for visitors by expanding hotel, retail, and entertainment opportunities.
- Create a development compatible with and sensitive to the existing land uses in the project area.
- Expand residential opportunities in the Edinger Corridor to provide a greater number and variety of housing options and a stronger base for the commercial sector of the Edinger Corridor.
- Ensure the proposed residential development complies with the City's affordable housing requirements and includes an affordable housing component.
- Enhance the community image of Huntington Beach through the design and construction of high quality, state-of-the-art development.
- Ensure adequate utility infrastructure and public services for new development and that the timing and funding of improvements is closely correlated with development phasing.
- Mitigate environmental impacts to the greatest extent possible.

The Applicant's objectives for proposed Village at Bella Terra are as follows:

- **Housing:** Provide an economically viable mixed use residential element to Bella Terra in order to assist the City in meeting its housing goals and to expand the client base for retail and restaurant uses at Bella Terra.
- **Economic Growth and Employment:** Provide (a) economic growth opportunities for the community through development of the project dining/retail/entertainment center, consistent with the City's General Plan goals; (b) additional employment opportunities for local and area residents through the commercial, residential, and retail uses on site; and (c) high-density residential to support the commercial components of Bella Terra.
- **Neighborhood Identity:** Reinforce the neighborhood identity of Bella Terra and the Towers at Bella Terra through project design elements such as architecture, landscaping, color, paving, walls, fencing, signage, entry treatment, and roadway design.
- **Commercial Phasing and Residential Density:** Maintain ability to build commercial and residential area in phases to provide a population base to help support the commercial, residential, and office uses consistent with the purpose of Bella Terra.
- **Pedestrian Access:** Implement a means of pedestrian access through the project via on-site paths consistent with the Specific Plan objectives.
- **Traffic Improvements:** Enhance project circulation and the surrounding roadway system by providing efficient vehicular access through the site and connecting the site to the surrounding existing roadway network.

The alternatives that are evaluated in this section include the following:

- **Alternative 1: No Project/No Development Alternative**—In addition to alternative development scenarios, Section 15126.6(e) of the CEQA Guidelines requires the analyses of a “no project” alternative. The purpose of examining such an alternative is to allow decision-makers to compare the effects of approving the project with the effects of not approving the project. For the purposes of this analysis, the “no project” alternative would serve as a “no development” alternative with the site remaining in its existing condition. This would include the continuation of the existing 190,100 square feet (sf) of vacant retail use and 18,600 sf of vacant auto repair uses. The site would remain in its current state, and would not allow further development nor would the existing buildings acquire tenants.

Methodology for Selection of Alternative 1: Section 15126.6(e)(3)(C) of the CEQA Guidelines states that the lead agency should analyze the effects of the no project alternative by evaluating what could reasonably be expected to occur in the foreseeable future if no changes were to occur. Therefore, under Alternative 1, the impacts of the proposed project are compared to the impacts that could occur under the existing development. This alternative would result in the continuation of the vacant commercial uses on the site and would not involve any improvements at the site.

- **Alternative 2: No Project/Reasonably Foreseeable Development under the Current General Plan**—Consistent with Section 15126.6(e)(3)(C) of the CEQA Guidelines, this alternative assumes the site would be developed as mixed-use site as identified in the existing General Plan. Therefore, this alternative assumes that 396 residential units (690,426 sf) would be developed along with 345,213 sf of commercial space. In general, this alternative would result in similar, although

generally reduced, environmental impacts as compared to either Option 1 or Option 2 of the proposed project. However, transportation impacts would be increased.

Methodology for Selection of Alternative 2: Section 15126.6(e)(3)(C) of the CEQA Guidelines states that the lead agency should analyze the effects of the no project alternative by evaluating what could reasonably be expected to occur in the foreseeable future, based on current plans and consistent with available infrastructure and community services. Therefore, under Alternative 2, the impacts of the proposed project are compared to the impacts that could occur under the existing, adopted General Plan. This alternative would result in the development of residential and commercial uses as allowed under the current General Plan.

- **Alternative 3: Reduced General Plan Amendment/Zoning Text Amendment Alternative—** This alternative assumes a reduced intensity of the project elements at the same project site. Under this alternative, the proposed The Village at Bella Terra project would develop 538 residential units and 138,085 sf of commercial uses.

Methodology for Selection of Alternative 3: This alternative was selected to reduce the project footprint and overall intensity of use at the site to reduce construction and operational impacts and reduce the amount of traffic that would be generated by residential and retail use. To achieve this, the proposed The Village at Bella Terra project would be reduced in size, which may result in the site being reconfigured.

6.2 ALTERNATIVES REJECTED AS INFEASIBLE

During the scoping process, other alternatives were also considered, but were found to be infeasible, as described in the following sections.

6.2.1 Alternative Locations/Sites

Given that the City of Huntington Beach is a highly urbanized area, underdeveloped or vacant land parcels of similar size to the project are limited. Additionally, many of the project objectives would not be satisfied by moving the project to another location. For example, one of the objectives is to enhance the Edinger Corridor as a destination for visitors by expanding hotel, retail, and entertainment opportunities, which thereby limits the potential for alternative locations. Another objective is to assist in the implementation of the Redevelopment Plan. Alternative locations that may be suitable in size to accommodate future mixed-use development would not be able to further the revitalization of this targeted area. In addition, there are a number of other project objectives that could not be served at other locations. For example, the project is designed to provide an economically viable mixed-use residential element to the existing Bella Terra regional shopping center in order to assist the City in meeting its housing goals and to expand the client base for retail and restaurant uses at Bella Terra. No other feasible locations are available in the City to successfully complete this objective. Therefore, the alternative site alternative was rejected as infeasible.

6.3 ANALYSIS OF ALTERNATIVES TO THE PROPOSED PROJECT

This section provides an analysis of the environmental impacts of each of the project alternatives, summarized previously in Section 6.1, including a comparison of the potential impacts of the alternative to the proposed project, as well as the impacts that would result from implementation of the project alternatives themselves.

Three alternatives are analyzed in this section, including two No Project Alternatives (No Development and Reasonably Foreseeable Development under the Current General Plan). The No Project/No Development Alternative must be analyzed pursuant to Section 15126.6(e) of the CEQA Guidelines to allow decision-makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. The second alternative analyzes a similar No Project Alternative; however, development would be allowed to occur under the existing General Plan Guidelines. The third alternative considers a reduced project option, with both residential and commercial uses. Each of the alternatives was selected because of their potential to avoid or substantially lessen one or more significant impacts of the proposed project such as impacts related to air quality and traffic conditions.

6.3.1 Alternative 1: No Project/No Development Alternative

■ Description

As discussed previously, Section 15126.6(e) of the CEQA Guidelines requires the analysis of a “no project” alternative. The purpose of examining such an alternative is to allow decision-makers to compare the effects of approving the project with the effects on not approving the project. This “no project” analysis must discuss the existing conditions, as well as what would be reasonably expected to occur in the foreseeable future if the project were not to be approved. The No Project/No Development Alternative represents the status quo; the project site would remain vacant with the existing 190,100 sf retail space and 18,600 sf auto repair uses. No residential uses or improvements to the site would occur.

■ Potential Impacts

In general, no new environmental effects would directly result from the selection of this alternative. Maintenance of the project site in its present state would allow the continuation of the vacant buildings. As a result, the project would not attract new vehicle traffic, nor would this alternative result in an increase in air quality or noise impacts. The site would remain visually as-is, eliminating changes to the visual character and land uses on site. However, the introduction of a high-density mixed-use project near an existing transit center and regional shopping center would also not occur. No significant and adverse environmental impacts directly or cumulatively associated with this alternative would occur.

■ Attainment of Project Objectives

Under this alternative, future mixed-use development would not be constructed. As a result, none of the identified project objectives would be obtained by implementation of this alternative, as no new retail or

residential uses would be developed. While this alternative may result in a reduction of most environmental impacts associated with the proposed project, it would not satisfy the identified project objectives.

6.3.2 Alternative 2: No Project/Reasonably Foreseeable Development under the Current General Plan

■ Description

This alternative assumes the development level articulated in the City's General Plan (1996). Currently, the project site has a General Plan designation of CR-F2-sp-mu-F9 (Commercial Regional), with a mixed-use and specific plan overlay. The project site currently has a zoning designation of SP (Specific Plan No. 13—The Crossings), which establishes the general type, location, architectural style and character of all development within the site's boundaries. Specific Plan No. 13 provides for a planned retail, dining, and entertainment complex but does not permit residential uses. Therefore, the existing land use and zoning designations are not consistent with one another.

Assuming a future lot line adjustment would also occur under this alternative, with a project site of 15.85 acres (approximately 690,426 sf), roughly 1,035,639 sf of residential and commercial uses could be developed. Therefore, under this alternative, a total of 396 residential units and 345,213 sf of commercial space would be developed, as this is the largest amount allowed under the current General Plan. Site configuration would be similar to conceptual plans identified under the proposed project and implementation of this Alternative would also require a Zoning Text Amendment (ZTA) in order to amend Specific Plan No. 13 to allow residential uses on site as well as a GPA to increase stories from four to six.

■ Potential Impacts

Aesthetics

This alternative would result in mixed-use residential and commercial development on site. As the proposed project would represent an additional 172,606 sf compared to development under this Alternative, it is likely that future development would be smaller in overall size and massing and would likely result in an alternative configuration. The project site and surrounding area do not constitute a scenic vista; therefore, no scenic vistas would be impacted as a result of the Alternative.

Currently, the project site is developed with two large vacant commercial buildings in disrepair. This alternative would develop the site into a mixed-use development, with similar architectural style and character as compared to the existing Bella Terra regional shopping center to the east of the site. Existing structures at the Bella Terra Mall generally range from 33 to 90 feet with tower elements rising to approximately 104 feet. In addition, The Ripcurl project would incorporate a five-story mixed-use development in the area, if approved. This alternative would require a GPA to increase allowable building height from four to six stories. Although this is still an increase from the allowable height at the

site, it would be less than the 10 stories proposed under the proposed project. Therefore, although this alternative would allow development that would be taller than the existing buildings on site, the existing four-story height limit as identified in the General Plan for the project site would not be out of character with surrounding structures in the project vicinity. Similar to the proposed project, a ZTA would ensure that the height, bulk, architecture, and/or signage on site would not degrade the visual unity of the area. Therefore, this alternative would not degrade the visual quality of the site or its surroundings. As such, visual impacts under this alternative would be similar to the proposed project, although slightly less since overall building heights would be four stories to six stories as compared to six to ten stories under the proposed project, and would remain less than significant.

Impacts associated with light and glare would also be similar to the proposed project, because interior and exterior artificial light would be necessary. Due to the urban nature of the project area, a substantial amount of nighttime ambient light already exists. Overall light impacts resulting from implementation of this alternative would be similar to the proposed project, resulting in a less-than-significant impact. Mitigation measure MM4.1-1, which requires the Applicant to use nonreflective façade treatment, would apply to this alternative. Glare from headlights entering and exiting the site from Center Avenue and Edinger Boulevard would be momentarily visible to uses across each roadway. However, as no light sensitive uses are located directly adjacent to the project site that would be affected by vehicle headlights, impacts from glare would be less than significant, similar to the proposed project.

Overall, aesthetic impacts anticipated under this alternative would be slightly less than the proposed project due to the reduced building heights, and would be less than significant.

Air Quality

Implementation of this alternative would require demolition of on-site structures and construction of residential units and commercial space, similar to the proposed project. Construction impacts resulting from this alternative would be similar to Option 1, and slightly lower than those identified for Option 2 of the proposed project. As a result, all City code requirements and mitigation measures identified for the proposed project would apply to Alternative 2 as well. While this alternative would reduce the number of residential units compared to both Option 1 and Option 2, retail space would be more than doubled that identified for the Option 1. However, due to the amount of proposed commercial space, daily traffic volumes for this alternative were projected at 7,552 daily trips, which is greater than both Option 1 and Option 2. As such, the amount of air pollutant emissions (i.e., CO, VOC, NO_x, SO_x, and PM₁₀) generated by motor vehicles and daily operation of the site would be similar to, but slightly greater than the proposed project.

Like the proposed project, construction activities associated with this alternative would include grading and compaction of the on-site soil, building construction, application of architectural coating to the interior and exterior of the new structures, and application of new asphalt. Compliance with the identified City code requirements and implementation of identified mitigation measures would reduce this impact to a less-than-significant level. As the footprint of development would likely be less than that identified for Option 1 and Option 2, impacts would be less than the proposed project. However, because demolition and site grading activities would be the same for any future development options on

site, the construction related emissions would be greater than the identified SCAQMD thresholds for NO_x (during demolition and site grading) would remain significant and unavoidable. Additionally, fewer VOCs during the painting phase would be anticipated due to the reduced building footprint; however, it is anticipated that this would remain significant and unavoidable as well simply due to the large-scale development that would occur. Therefore, this alternative would result in a significant and unavoidable impact, similar to the proposed project.

Emissions generated during operation of this alternative would be similar to the proposed project. Stationary emissions generated during operation of this alternative would not be anticipated to exceed the thresholds established by the SCAQMD. However, mobile source emissions resulting from operation of this alternative would be anticipated to exceed SCAQMD thresholds for VOC, NO_x , CO, and PM_{10} . As stated previously, this alternative is projected to generate more daily vehicle trips than both Option 1 and Option 2. As both options under the proposed project exceeded the thresholds in the four above stated categories, this alternative is also anticipated to exceed the thresholds. Therefore, despite the identified mitigation measure (for the proposed project) that would require the applicant to install electrical outlets in all loading docks, this impact would be significant and unavoidable, similar to the proposed project.

Operation of this alternative would generate increased local traffic volumes but would not expose sensitive receptors to substantial localized carbon monoxide (CO) concentrations. Although traffic volumes would increase above those identified for the proposed project, the roadway CO emissions would not exceed the established 1-hour or 8-hour thresholds. Therefore, this impact would be greater than the proposed project, but would remain less than significant.

Due to the size of this alternative, construction emissions for CO, NO_2 , PM_{10} , and $\text{PM}_{2.5}$ are required to be compared to LSTs developed by the SCAQMD. As this alternative is anticipated to result in similar emission levels as compared to the proposed project, the alternative is anticipated to exceed the SCAQMD threshold for $\text{PM}_{2.5}$ emissions during proposed project construction, similar to the proposed project. Therefore, this alternative would result in a significant and unavoidable impact with respect to exceedance of localized significance thresholds ($\text{PM}_{2.5}$) established by the SCAQMD.

Construction and operation of this alternative would not create objectionable odors, from either construction activities or daily operation affecting a substantial number of people, as the distance between the site and adjacent land uses would ensure that any such odors would dissipate. This impact would be less than significant.

Similar to the proposed project and based on the other known area projects, construction and operation of this alternative would result in a cumulatively considerable net increase of criteria pollutants for which the region is in nonattainment under applicable federal or State ambient air quality standards.

Overall, air quality impacts anticipated under this Alternative would be slightly greater than the proposed project and many would remain significant and unavoidable.

Cultural Resources

Both the proposed project and Alternative 2 would demolish the existing on-site buildings and construct improved developments on the site, which could potentially disturb previously unknown cultural resources within the project site, including human remains. This would occur specifically during the grading and trenching phases of construction. Despite the overall difference in project size when compared to the proposed project options, the Alternative would result in grading of the entire site. Project requirements and mitigation measures incorporated into the proposed project would ensure that this impact would be less than significant. Alternative 2 would be required to adhere to the policies of the General Plan and Municipal Code requirements with regard to cultural resources as well as those measures identified for the proposed project, and impacts from Alternative 2 would similarly be less than significant.

Geology and Soils

Similar to the proposed project, this alternative could expose people and/or structures to potentially substantial adverse effects resulting from strong seismic groundshaking or seismic-related ground failure. All impacts associated with geological and soil impacts that were identified for the proposed project would also apply to Alternative 2. The risks to people and structures would not be increased regardless of the size of the development, as adherence to these regulations would assure seismic safety to the greatest extent possible. This alternative could result in soil erosion, but would not result in the loss of topsoil. As part of the project, a site-specific Stormwater Pollution Prevention Plan, which is part of the NPDES Municipal General Permit, would be prepared for development under this alternative. Construction and building of the residential and retail uses would follow all established policies and codes. Through compliance with federal, state, and local regulations related to seismic safety, impacts would remain less than significant. Therefore, impacts associated with geology and soils would be similar to the proposed project and would result in a less-than-significant impact.

Hazards and Hazardous Materials

Although the intensity of operational development under Alternative 2 would be slightly less than that identified for the proposed project, potential impacts with respect to hazards and hazardous materials would generally be similar because the types of uses would remain the same and similar construction activities would take place on site. Construction of Alternative 2 would involve the use of hazardous materials, specifically in the form of diesel fuel. Project construction could expose construction workers to significant health and safety hazards through earthmoving activities that could result in the release of hazardous materials to the environment through reasonably foreseeable upset and accident conditions. Implementation of the identified mitigation measures would reduce this impact to a less-than-significant level, similar to the proposed project. Operation of the residential and commercial uses for Alternative 2 could involve the use of hazardous materials in the form of basic household cleaning materials and landscaping chemicals. Overall, Alternative 2 would result in similar impacts with respect to hazards and hazardous materials as compared to the proposed project. Therefore, impacts would be less than significant.

Hydrology and Water Quality

As this alternative is located on the same site as the proposed project, no impact would occur with respect to exposing people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dams. No impact would occur with respect to the depletion of groundwater resources, nor would the alternative substantially alter the existing drainage pattern of the site or area. As identified for the proposed project, this alternative would not expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow nor would it result in substantial degradation of water quality. No impact would occur, similar to the proposed project.

Construction and operation of Alternative 2 could increase stormwater pollutant loads or concentrations, which could result in a violation of waste discharge requirements or water quality standards and provide substantial additional sources of polluted runoff. As identified for the proposed project, construction activities that would occur under this alternative would be required to follow all existing regulatory requirements as identified for the proposed project. By following all the requirements identified for the proposed project, this alternative would result in a less-than-significant impact during construction. Further, the project site is currently developed with impervious material. Operation of this alternative would be required to follow the best management practices identified for the proposed project. Additionally, the mitigation measures identified for the proposed project requiring the Applicant to prepare a site-specific Water Quality Management Plan would also apply to this alternative. Therefore, operation of this alternative would result in a less-than-significant impact, similar to the proposed project.

Similar to both Option 1 and Option 2 of the proposed project, construction of development permitted under this alternative could require groundwater dewatering for a subterranean parking garage. This impact would be temporary and less than significant, similar to the proposed project. Construction and operation would not result in a significant impact with respect to substantially altering the existing drainage pattern of the project site. Construction of this alternative would require a City grading permit, erosion control plans, and other requirements as identified for the proposed project. Once operational, this alternative would not result in significant changes to the drainage patterns of the site, as it is currently developed with impervious materials. This impact would be less than significant, similar to the proposed project.

The project site is currently flat and consists of approximately 90 percent impervious surfaces that drain as sheet flow to local streets to underground storm drains to the Murdy Channel. This alternative would not substantially change the amount of impervious material on the site. However, this alternative, like the proposed project, may substantially alter the project site drainage by grading to change drainage direction, infrastructure alterations that could alter drainage areas, and changes to the amount of impervious surfaces draining to Edinger Avenue. However, mitigation measure MM4.7-2, identified for the proposed project, would be applied to this alternative. This measure would require the Applicant to prepare a hydrology and hydraulics study and City-approved project drainage plan and to reduce peak runoff rates for the design storm events to existing conditions levels. Implementation of the identified mitigation measure would reduce the potential for flooding and storm conveyance capacity to less-than-significant levels, similar to the proposed project.

The project site is located within a 100-year flood plan. As a result, this alternative would be required to follow the identified requirements for the proposed project. All residential uses must be developed at least 2 feet above the existing grading line, 1 foot above for FEMA and one additional foot above as required by Chapter 222 of the Huntington Beach Zoning and Subdivision Ordinance. All nonresidential structures, including utilities and sanitary facilities must be elevated or flood-proofed to above the flood depth and capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy as required by Chapter 222 of the Huntington Beach Zoning and Subdivision Ordinance. By following these standards, the alternative would result in a less-than-significant impact, similar to the proposed project.

This alternative, similar to the proposed project, would include construction activities that could contribute additional sources of polluted runoff to the storm drain system. However, existing regulatory requirements would ensure that construction of new or expanded stormwater drainage facilities would not result in substantial environmental effects and potential impacts would be less than significant, similar to the proposed project.

Land Use

Implementation of this alternative would not result in impacts related to land use nor would it conflict with existing land use policies in place for the site or the City. This alternative would develop the site into a mixed-use residential and retail site to the amount currently allowed under the existing General Plan (a total of 396 residential units, covering 690,426 sf of space and an additional 345,213 sf of commercial uses could be developed on site.) Therefore, unlike the proposed project, a General Plan Amendment to increase the allowable density on the project site would not be required. However, because the existing Specific Plan No. 13 does not conform to the existing land use designation, a Zoning Text amendment would still be required to bring the Specific Plan into conformance with the General Plan designation to allow residential uses on site. Therefore, this alternative would not interfere with the existing land use plans for the project site, and would result in a less-than-significant impact, similar to the proposed project.

Noise

Demolition of existing structures and construction of a new mixed-use development would occur under Alternative 2. Construction noise impacts would be similar to the proposed project because demolition activities and construction at the site would still occur. The overall length of construction could be slightly reduced due to the reduced size of Alternative 2 compared to the proposed project. While construction noise could be a nuisance to nearby sensitive uses, compliance with the City's Noise Ordinance would ensure that construction noise impacts remain less than significant. Implementation of identified mitigation measures would reduce construction noise impacts, which would be temporary. While construction related noise could be slightly reduced in length, operational noise would be anticipated to be similar to, although slightly greater than that identified for the proposed project. This would be due to the greater number of daily vehicle trips to the project site when compared to either Option 1 or Option 2 of the proposed project. This alternative is anticipated to result in 7,552 daily vehicle trips, due to the larger overall space set aside for commercial use. Therefore, operation of this

alternative would result in a similar, but slightly greater noise impact when compared to the proposed project. This would be less than significant.

Vibration associated with construction and operation of this alternative would result in a less-than-significant impact, similar to the proposed project.

This alternative would result in a permanent noise increase at the project site and the surrounding area due to an increase in vehicular traffic. The noise increases as a result of increased traffic would be similar to, but slightly greater than those identified for either Option 1 or Option 2 of the proposed project. Impacts are expected to remain less than significant under this Alternative.

Construction activities occurring within the project site would involve demolition, grading, and excavation activities, followed by construction and external finishing of the proposed facilities and associated parking areas, as well as roadway and landscaping improvements. These activities would involve the use of heavy equipment. Construction activities would also involve the use of smaller power tools, generators, and other equipment that generates noise. Each stage of construction would use a different mix of equipment, and noise levels would vary based on the amount and types of equipment in operation and the location of the activity related to potential receptors.

Under Section 8.40.090(d) (Special Provisions) of Chapter 8.40 of the City's Municipal Code, noise sources associated with construction are exempt from the requirements of the Municipal Code, provided that construction activities do not occur between the hours of 8:00 P.M. and 7:00 A.M. on weekdays, including Saturday, or at any time on Sunday or a federal holiday. Additionally, mitigation measures MM4.9-1 and MM4.9-2, and 4.9-3 have been identified to minimize or reduce construction related noise levels to the extent feasible. However, even with the reduced project footprint as part of this alternative, noise levels during pile driving activities could reach up to 80 dBA at the Old World Village Apartments located approximately 480 feet to the north of the proposed project. The construction contractor would be required to implement noise attenuation measures during pile driving activities, including but not limited to the utilization of noise blankets, which would reduce noise levels up to 10 dBA. However, pile driving activities would last for approximately 6 months, and therefore, this temporary increase in ambient noise levels would be noticeable and would likely be cause for human annoyance. Pile driving activities would also be limited to Monday thru Friday, 8:00 A.M. to 4:00 P.M. Implementation of the above mentioned mitigation measures would reduce the noise levels associated with impact pile driving activities, but not to a level of less than significant. Therefore, construction related temporary increases in ambient noise levels would be considered significant and unavoidable, similar to the proposed project.

Population and Housing

Alternative 2 would result in the development of 396 residential units, lower than both Option 1 and Option 2 of the proposed project. Once fully occupied, the population increase as a result of Alternative 2 is anticipated to be 1,049 residents; assuming 2.65 persons per unit (see Section 4.10 [Population and Housing]). This increase in population would be approximately 840 less than the 1,889 residents projected for Option 1 and approximately 377 fewer residents compared to the 1,426 residents projected for Option 2. The General Plan assumes buildout of the project site to include 396 residential

uses. Therefore, the projected population increase as a result of this alternative has been assumed as part of the City's population projections. Therefore, this impact would be less than significant.

Public Services

Implementation of this alternative would not result in additional impacts to public services beyond those identified for the proposed project. Fire protection could be adequately provided by existing services and statutory requirements, and this impact would be less than significant, as identified for the proposed project. Additional demands on police personnel as a result of implementing this alternative would not be substantial. The ratio of population to police officers would be slightly greater under this alternative as it would generate a lower permanent resident population. Further, this alternative does not include any unique uses or features requiring substantial police service, although commercial uses at the project site would be greater than those identified for the proposed project. Mitigation measures MM4.11-1 would apply to this alternative, reducing impacts to a less-than-significant level. Impacts on schools as a result of the population increase would be similar to, although slightly less than those identified for the proposed project and City Requirements CR4.11-1 and CR4.11-2 would ensure that this impact remains less than significant. Library services would be considered less than significant with respect to this alternative, assuming compliance with City Requirement CR4.11-3 which requires the Applicant to pay library and community enrichment impact fees, similar to the proposed project.

Recreation

This alternative would result in the development of 396 residential units, which is projected to result in approximately 1,049 new residents. Construction and operation of this alternative is not anticipated to interfere with existing parks and recreational resources. Although the increase in residents as part of this alternative would be lower than what has been projected for Option 1 and Option 2 of the proposed project, this alternative would implement mitigation measure CR4.12-1, which would require the Applicant to either dedicate on-site parkland and/or pay all applicable open space and park fees prior to issuance of building permits. As the alternative would be similar to the proposed project in terms of recreational uses and needs, impacts would remain less than significant, as identified for the proposed project.

Transportation/Traffic

Implementation of this alternative would result in the development of 396 residential units and 345,213 sf of commercial use. This alternative would generate an average daily trip volume of 7,552 vehicles, which would be greater than the traffic volumes identified for both Option 1 and Option 2 of the proposed project. Therefore, traffic impacts would be anticipated to be similar to, although slightly greater than those identified for the proposed project. The increase in average daily trips is due to the increase in the amount of commercial space that would be developed under this alternative. Traffic and transportation impacts resulting from construction of the proposed project would be anticipated to be similar to the proposed project, resulting in a less-than-significant impact.

Future traffic conditions in 2014 and 2030 that would occur as a result of this alternative were identified in Section 4.13 (Transportation/Traffic) of the EIR as no-project conditions. Traffic impacts resulting from operation of this alternative in 2014 and 2030 would be similar to those identified for the proposed project. As a result, a significant impact would be anticipated to occur at the intersection of Beach Boulevard and Edinger Avenue. However, Mitigation Measure MM4.13-1, which requires the applicant to pay a fair share price for the construction of an additional northbound through lane along Beach Boulevard or an additional westbound through lane on Edinger Avenue, would reduce this impact to a less-than-significant level, similar to the proposed project. However, this alternative would contribute traffic to projected deficiencies on I-405 (in both 2014 and 2030), similar to proposed project although to a greater degree. Similar to the proposed project, the addition of traffic to a projected deficiency is considered significant and unavoidable.

Implementation of this alternative, similar to the proposed project, is not anticipated to exceed the level of service standards established by the Orange County Transportation Authority with respect to congestion management. Two CMP intersections are located in the study area: 1) Beach Boulevard at Edinger Avenue, and 2) Beach Boulevard at Warner Avenue. CMP-designated intersections have a performance standard of LOS E or better (intersection capacity utilization (ICU) not to exceed 1.00), and a project is considered to have a significant impact if it contributes 0.01 or more to an ICU when the performance standard is exceeded. As identified on page 5-8 of the Traffic Study, 2014 ICU values for this alternative show ICU values of 0.73 and 0.92 (AM and PM peak hours, respectively) for the intersection of Beach Boulevard and Edinger Avenue, and ICU values of 0.72 and 0.92 (AM and PM peak hours, respectively) for the intersection of Beach Boulevard and Warner Avenue. Neither CMP intersection shows ICU values that exceed the allowable CMP threshold of 1.00. Therefore, this alternative would not result in CMP impacts. This impact would be less than significant, similar to the proposed project.

Although future development under this alternative may result in an alternative configuration due to the reduced residential uses, it is anticipated that the overall site layout, including ingress and egress from Edinger Avenue and Center Avenue, would remain the same as that identified for Option 1 and Option 2 of the proposed project. Therefore, this alternative would not include site designs that could result in traffic hazards. Further, the alternative would provide emergency access to the site along the western edge, similar to the proposed project. No significant impacts would occur as a result of changes in air traffic patterns as the site is not located within any air traffic plans.

An adequate number of parking spaces would be determined by a shared parking study. Although a final number of parking spaces have not yet been determined for this alternative, it is assumed that this impact would be similar to those identified for the proposed project, and would result in a less-than-significant impact.

Overall, impacts related to transportation and traffic would be similar to, although slightly greater than those identified for the proposed project.

Utilities

Implementation of this alternative would result in utility impacts that are similar to the proposed project. This analysis utilizes the same generation factors that are presented in Section 4.14 (Utilities and Service Systems). For water, Alternative 2 would require an estimated 66,805 gallons per day (gpd) for residential uses and 51,782 gpd for commercial uses. In total, this alternative would require an estimated 118,587 gpd of water, or 43,284,255 gallons per year (gpy), not accounting for landscaping water, which would be estimated to be similar to the proposed project. When compared to either Option 1 or Option 2 of the proposed project, this alternative would require less overall gallons per year than either option of the proposed project. This would result in a less-than-significant impact with respect to water needs. Further, Alternative 2 would result in a less-than-significant impact with respect to the need for new or expanded water treatment facilities, similar to the proposed project.

For wastewater impacts, Alternative 2 would result in similar, but slightly lower impacts as compared to either Option 1 or Option 2 of the proposed project. This alternative would generate an estimated 74,052 gpd of wastewater from the residential portion and an estimated 69,042 for a total of 143,094 gpd of wastewater. This would be lower than the total gpd of wastewater estimated for either Option 1 or Option 2 of the proposed project. Therefore, Alternative 2 would result in slightly lower impacts related to wastewater and would have a less-than-significant impact.

Alternative 2 would reduce the overall amount of solid waste generated at the project site. Alternative 2 would generate an estimated 0.793 tons per day of solid waste from residential uses and 1.03 tons per day from commercial uses. Therefore, Alternative 2 would produce approximately 1.822 tons of trash per day. This would be similar to, although slightly less than, the proposed project and would result in a less-than-significant impact.

For energy, Alternative 2 would require similar energy resources compared to the proposed project. As the proposed project was found to have adequate resources to provide energy to residential and commercial users, this alternative would result in a similar less-than-significant impact.

■ **Attainment of Project Objectives**

Under this alternative, a mixed-use project would be constructed. This alternative would involve the construction of 396 residential units and 345,213 sf of commercial space. As a result, all of the identified project objectives for the proposed project would be achieved with implementation of this alternative.

Although the Alternative would fulfill the project objectives identified for the proposed project, it would not reduce significant impacts identified for the proposed project to less-than-significant levels. This alternative could, in the case of traffic, increase impacts.

6.3.3 Alternative 3: Reduced GPA/ZTA Alternative

■ Description

This alternative (referred to as the reduced alternative) assumes a reduced development scenario would occur at the project site. This alternative assumes development of the lower development potential of commercial and residential uses under each Option of the proposed project. Therefore, a total of 583 residential units and 138,085 sf of commercial space would be developed under this alternative. This alternative would result in a similar overall site plan as identified for the proposed project, and would occur in the same 15.85-acre site as the proposed project. Similar to the proposed project, this alternative would require a GPA and ZTA to allow for a greater density of development than what is allowed under the current General Plan.

■ Potential Impacts

Aesthetics

This reduced alternative would result in a smaller mixed-use residential and commercial development compared to the proposed project. Overall massing would be reduced and the 10-story element of the proposed project would be reduced to a maximum of six stories. The project site and surrounding area do not constitute a scenic vista; therefore, no scenic vistas would be impacted as a result of the Alternative.

Currently, the project site is developed with two large vacant commercial buildings in disrepair. This alternative would develop the site into a mixed-use development, with similar architectural style and character as compared to the existing Bella Terra regional shopping center to the east of the site. Existing structures at the Bella Terra Mall generally range from 33 to 90 feet with tower elements rising to approximately 104 feet. In addition, The Ripcurl project would incorporate a five-story mixed-use development in the area, if approved. The existing four-story height limit would be increased to six stories, but would be less than the ten stories permitted under the proposed project. Therefore, although this alternative would allow development that would be taller than the existing buildings on site, the six-story height limit for the project site would not be out of character with surrounding structures in the project vicinity. Similar to the proposed project, a ZTA would ensure that the height, bulk, architecture, and/or signage on site would not degrade the visual unity of the area. Therefore, this reduced alternative would not degrade the visual quality of the site or its surroundings. As such, visual impacts under this alternative would be similar to the proposed project, although slightly less since the maximum building heights would be six stories as compared to the allowable increase of up to ten stories under the proposed project, and would remain less than significant.

Impacts associated with light and glare would also be similar to Alternative 2, as well as the proposed project, because interior and exterior artificial light would be necessary. Due to the urban nature of the project area, a substantial amount of nighttime ambient light already exists. Overall light impacts resulting from implementation of the reduced alternative would be similar to the proposed project, resulting in a less-than-significant impact. Mitigation measure MM4.1-1, which requires the Applicant to use

nonreflective façade treatment, would apply to the reduced alternative. Glare from headlights entering and exiting the site from Center Avenue and Edinger Boulevard would be momentarily visible to uses across each roadway. However, as no light sensitive uses are located directly adjacent to the project site that would be affected by vehicle headlights, impacts from glare would be less than significant, similar to the proposed project.

Overall, aesthetic impacts anticipated under the reduced alternative would be similar to the proposed project, as the reduced alternative would develop both retail and residential uses at the site, and would be less than significant.

Air Quality

The 2007 AQMP was prepared to accommodate growth, to reduce the high levels of pollutants within the areas under the jurisdiction of SCAQMD, to return clean air to the region, and to minimize the impact on the economy. Projects that are considered to be consistent with the AQMP would not interfere with attainment, because this growth is included in the projections used to formulate the AQMP. Therefore, projects, uses, and activities that are consistent with the applicable assumptions used in the development of the AQMP would not jeopardize attainment of the air quality levels identified in the AQMP, even if they exceed the SCAQMD's recommended daily emissions thresholds.

Projects that are consistent with the projections of employment and population forecasts identified in the Growth Management Chapter of the RCPG are considered consistent with the AQMP growth projections. In turn, projects that are consistent with City's General Plan are considered to be consistent with the Growth Management Chapter, as the General Plan forms the basis for population and employment forecasts in the RCPG. This is because the Growth Management Chapter forms the basis of the land use and transportation control portions of the AQMP.

The reduced alternative would involve the construction of 538 residential units and 138,085 sf of commercial space, a combination of each of the options identified for the proposed project. The project site is currently planned for commercial regional and residential land uses. Under the existing General Plan, a maximum of 396 residential units and 345,213 sf of commercial space could be built on the site. Therefore, by balancing out the increased residential uses and decreased commercial uses under this alternative, population increases as a result of the proposed project would generally be similar to those projected by SCAG and subsequently used for the 2007 AQMP. Further, past residential projects within the City of Huntington Beach have not reached the full size allowed under the General Plan for those sites (Broeren 2008). Many of these projects have been developed to 70 percent of the total allowable size with the City not reaching its full population potential within the time frame previously anticipated. By way of example, the majority of the City's new housing growth in the last 10 years has occurred in the Holly Sea Cliff area. The total number of units built is 33 percent less than what could have been built at allowed densities. Similarly, recent developments along the coast, Waterfront Residential and Boardwalk/Mystic Point, have developed at densities that are 20 and 50 percent less than permitted, respectively (Broeren 2008). Therefore, development of reduced alternative would result in a less-than-significant impact with respect to conflicting with the existing AQMP.

Estimated air emissions from the construction activities associated with the reduced alternative were calculated using the URBEMIS 2007 emissions model approved by CARB. Construction activities would generally involve five stages: (1) abatement and demolition, (2) excavation and shoring, (3) trenching, (4) construction (which includes pile driving and building and parking construction), and (5) final coating along with landscaping improvements and paving activities.

The reduced alternative would involve the demolition of the existing on-site buildings, followed by the construction of 538 residential units and 138,085 sf of commercial space. Construction is anticipated to begin in the first quarter of 2009 and is estimated to take 35 months to complete. No more than 2 acres would be disturbed at any one period of time by earth moving equipment. Because of the construction time frame and the normal day-to-day variability in construction activities, it is difficult, if not impossible to precisely quantify the daily emissions associated with each phase of the proposed construction activities. Nonetheless, Table 6-1 (Estimated Peak Daily Construction Emissions in Pounds per Day) identifies daily emissions that are estimated to occur on peak construction days for the reduced alternative. These calculations assume that appropriate dust control measures would be implemented during each phase of development as required by SCAQMD Rule 403—Fugitive Dust, and that all other appropriate mitigation, such as routine equipment maintenance, has been used.

As shown, construction-related daily emissions would exceed SCAQMD significance thresholds for NO_x during the demolition and grading phases and VOCs emitted during the architectural coating (painting) phase of the reduced alternative. No other threshold is anticipated to be exceeded during construction.

Table 6-1 Estimated Peak Daily Construction Emissions in Pounds per Day						
Emissions Source	Peak Day Emissions in Pounds per Day					
	VOC	NO _x	CO	SO _x	PM ₁₀ ^a	PM _{2.5} ^a
Demolition Phase (3.5 months)						
Construction Equipment	9.07	79.44	30.93	0.00	3.61	3.32
On-Road Vehicles	1.51	21.09	7.71	0.02	0.94	0.81
Fugitive Dust ^a	0.00	0.00	0.00	0.00	14.28	2.97
Worker Trips	0.08	0.16	2.64	0.00	0.02	0.01
Maximum Daily Emissions	10.67	100.68	41.29	0.03	18.86	7.12
SCAQMD Thresholds	75.0	100.0	550.0	150.0	150.0	55.0
Significant Impact?	No	Yes	No	No	No	No
Site Grading (1.5 months)						
Construction Equipment	16.47	146.14	65.27	0.00	6.65	6.12
On-Road Vehicles	1.30	18.06	6.60	0.02	0.81	0.70
Fugitive Dust ^a	0.00	0.00	0.00	0.00	20.72	4.33
Worker Trips	0.12	0.22	3.70	0.00	0.03	0.02
Maximum Daily Emissions	17.89	164.42	75.57	0.03	28.22	11.16
SCAQMD Thresholds	75.0	100.0	550.0	150.0	150.0	55.0
Significant Impact?	No	Yes	No	No	No	No

**Table 6-1 Estimated Peak Daily Construction Emissions
in Pounds per Day**

<i>Emissions Source</i>	<i>Peak Day Emissions in Pounds per Day</i>					
	<i>VOC</i>	<i>NO_x</i>	<i>CO</i>	<i>SO_x</i>	<i>PM₁₀^a</i>	<i>PM_{2.5}^a</i>
Trenching (3 months)						
Construction Equipment	9.01	77.04	30.27	0.00	3.73	3.43
Worker Trips	0.08	0.16	2.64	0.00	0.02	0.01
Maximum Daily Emissions	9.01	77.19	32.92	0.00	3.75	3.44
SCAQMD Threshold	75.0	100.0	550.0	150.0	150.0	55.0
Significant Impact?	No	No	No	No	No	No
Construction Phase (26.5 months)						
Construction Equipment	7.14	63.46	24.94	0.00	3.07	2.82
Vendor Trips	1.32	16.30	11.95	0.03	0.77	0.65
Worker Trips	1.58	2.98	50.32	0.06	0.43	0.23
Maximum Daily Emissions	10.04	82.75	87.21	0.09	4.27	3.70
SCAQMD Thresholds	75.0	100.0	550.0	150.0	150.0	55.0
Significant Impact?	No	No	No	No	No	No
Paving (0.5 month)						
Construction Equipment	7.01	42.55	20.77	0.00	3.14	2.89
On-Road Vehicles	0.27	3.76	1.37	0.00	0.17	0.14
Worker Trips	0.11	0.20	3.44	0.00	0.03	0.02
Maximum Daily Emissions	7.39	46.51	25.58	0.01	3.34	3.05
SCAQMD Thresholds	75.0	100.0	550.0	150.0	150.0	55.0
Significant Impact?	No	No	No	No	No	No
Architectural Coating (1 month)						
Architectural Coating ^b	78.97	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.07	0.12	2.17	0.00	0.02	0.01
Maximum Daily Emissions	79.04	0.12	2.17	0.00	0.02	0.01
SCAQMD Thresholds	75.0	100.0	550.0	150.0	150.0	55.0
Significant Impact?	Yes	No	No	No	No	No

SOURCE: PBS&J, 2008. Calculation sheets are provided in Appendix B.

^a Assumes watering of the proposed project site would occur three times per day.

^b Assumes the use of low VOC on all surfaces of Option 1.

All City code requirements and mitigation measures identified for both Option 1 and Option 2 of the proposed project would apply to the reduced alternative.

Although mitigation measure MM4.2-2(b) would require the use of low VOC paint for project coating, VOC emissions would remain above the thresholds established by the SCAQMD during the one month architectural coating phase. Further, mitigation measure MM4.2-2(a) would reduce the amount of NO_x during vehicle idling, but not to a level below the thresholds established by the SCAQMD during the

demolition and site grading phases. Therefore, construction impacts of the proposed project would remain significant and unavoidable, similar to the proposed project.

Operational emissions generated by both stationary and mobile sources would result from normal day-to-day activities on the project site after occupation. Stationary area source emissions would be generated by the consumption of natural gas for space and water heating devices, and the operation of landscape maintenance equipment. Mobile emissions would be generated by the motor vehicles traveling to and from the project site.

The analysis of daily operational emissions has been prepared utilizing the URBEMIS 2007 computer model recommended by the SCAQMD. Stationary operational emissions for the reduced alternative are identified in Table 6-2 (Project Daily Operational Emissions—Stationary Sources), below.

Table 6-2 Project Daily Operational Emissions—Stationary Sources						
<i>Emissions Source</i>	<i>Emissions in Pounds per Day</i>					
	<i>VOC</i>	<i>NO_x</i>	<i>CO</i>	<i>SO_x</i>	<i>PM₁₀</i>	<i>PM_{2.5}</i>
Natural gas	0.50	6.61	3.37	0.00	0.01	0.01
Landscaping	0.26	0.04	3.21	0.00	0.01	0.01
Consumer Products	27.60	~	~	~	~	~
Architectural Coatings	1.73	~	~	~	~	~
<i>Maximum Daily Emissions</i>	<i>30.09</i>	<i>6.65</i>	<i>6.58</i>	<i>0.00</i>	<i>0.02</i>	<i>0.02</i>
Thresholds (lb/day)	55.00	55.00	550.00	150.00	150.00	55.00
Significant Impact	No	No	No	No	No	No

SOURCE: PBS&J, 2008. Computer sheets are provided in Appendix B.

As shown, operation of reduced alternative would not result in stationary emissions that exceed the thresholds of significance recommended by the SCAQMD, similar to the proposed project.

Area source emissions, or mobile source emissions, would also occur as a result of operation of the Reduced Alternative. Table 6-3 (Project Daily Operational Emissions—Mobile Sources) identifies the emissions associated with mobile sources.

Table 6-3 Project Daily Operational Emissions—Mobile Sources						
<i>Emissions Source</i>	<i>Emissions in Pounds per Day</i>					
	<i>VOC</i>	<i>NO_x</i>	<i>CO</i>	<i>SO_x</i>	<i>PM₁₀</i>	<i>PM_{2.5}</i>
Apartments	20.89	23.48	240.14	0.29	48.35	9.34
Commercial	32.93	44.74	435.50	0.55	91.67	17.68
<i>Maximum Daily Emissions</i>	<i>53.82</i>	<i>68.22</i>	<i>675.64</i>	<i>0.84</i>	<i>140.02</i>	<i>27.02</i>
Thresholds (lb/day)	55.00	55.00	550.00	150.00	150.00	55.00
Significant Impact	No	Yes	Yes	No	No	No

SOURCE: PBS&J, 2008. Based on Summer Outputs. Computer sheets are provided in Appendix B.

Mitigation measure MM4.2-3 identified for the proposed project, which requires power outlets be provided in delivery areas for the project site would apply to the reduced alternative. This would allow delivery trucks that require cooling to plug in and turn off engines and generators, reducing emissions.

As shown, mobile source emissions during operation of the Reduced Alternative would generate emissions that exceed the thresholds of significance recommended by the SCAQMD for NO_x and CO. Emissions of VOC, SO_x, PM₁₀, and PM_{2.5} during operation of the reduced alternative would not exceed thresholds of significance recommended by the SCAQMD. The exceedance of the SCAQMD thresholds for these two criteria pollutants is primarily due to the increase in motor vehicles traveling to and from the site, as stationary emissions would not exceed thresholds. Implementation of mitigation measure MM4.2-3 would help reduce operational emissions, but not to a less-than-significant level. As no further feasible mitigation is available to reduce these emissions, this impact would remain significant and unavoidable, although less than the proposed project as the reduced alternative would not exceed the threshold for PM₁₀ and PM_{2.5} emissions.

Project-generated traffic from the reduced alternative could contribute to decreased levels of service at local intersections, resulting in longer vehicle idling times at and near study area intersections and additional vehicle emissions. These circumstances could lead to CO hot spots that may affect adjacent sensitive receptors such as schools or residences. The simplified CALINE4 screening procedure was used to predict future CO concentrations at the study area intersections that are projected to operate at LOS D or worse with buildout of the reduced alternative, as these intersections indicated the locations of the highest potential CO concentrations due to vehicle idling. Twelve of the studied intersections are projected to operate at LOS D or worse at project buildout (identified in Table 6-4).

The results of these calculations are presented in Table 6-4 (Carbon Monoxide Concentrations at Selected Intersections in 2030) for representative receptor location at the roadway edge (0 feet), 25 feet from the intersection, and 50 feet from the intersection.

As shown, future CO concentrations near these intersections would not exceed national or State ambient air quality standards under the reduced alternative. Therefore, CO hotspots would not occur near this nor any other intersection within the study area in the future as a result of the reduced alternative, and the contribution of project traffic-related CO at these intersections would be less than established thresholds. Therefore, this impact would be less than significant, similar to the proposed project.

As described above, the emissions from construction activities for the reduced alternative were estimated using the URBEMIS 2007 emissions model. Construction emissions related to development of the reduced alternative are shown in Table 6-1. For the purpose of this analysis, all emissions shown in Table 6-1 are assumed to originate from the project site, such as use of diesel-powered construction equipment. The on-site project combined construction emissions were then used in a dispersion model to estimate associated concentrations at the closest off-site sensitive receptors.

Table 6-4 Carbon Monoxide Concentrations at Selected Intersections in 2030

<i>Intersection</i>	<i>Carbon Monoxide (CO) Concentrations in (ppm)</i>					
	<i>Roadway Edge (0 feet)</i>		<i>25 feet</i>		<i>50 feet</i>	
	<i>1-Hour</i>	<i>8-Hour</i>	<i>1-Hour</i>	<i>8-Hour</i>	<i>1-Hour</i>	<i>8-Hour</i>
Goldenwest Street and Bolsa Avenue	5.1	3.2	5.1	3.2	5.1	3.2
Goldenwest Avenue and McFadden Avenue	5.1	3.2	5.1	3.2	5.0	3.2
Beach Boulevard and Edinger Avenue	5.1	3.3	5.1	3.2	5.1	3.2
Newland Street and Edinger Avenue	5.1	3.2	5.0	3.2	5.0	3.2
Beach Boulevard and Heil Avenue	5.1	3.2	5.1	3.2	5.1	3.2
Gothard Street and Warner Avenue	5.1	3.2	5.1	3.2	5.0	3.2
Beach Boulevard and Warner Avenue	5.1	3.2	5.1	3.2	5.1	3.2
Newland Street and Warner Avenue	5.1	3.2	5.1	3.2	5.0	3.2
Beach Boulevard and McFadden Avenue	5.1	3.2	5.1	3.2	5.1	3.2
Beach Boulevard and Bolsa Avenue	5.1	3.2	5.1	3.2	5.1	3.2
Beach Boulevard and Hazard Avenue	5.1	3.2	5.1	3.2	5.1	3.2
Magnolia Street and Edinger Avenue	5.1	3.2	5.0	3.2	5.0	3.2

SOURCE: PBS&J, 2008; Calculation sheets are provided in Appendix B.

National 1-hour standard is 35.0 parts per million. State 1-hour standard is 20.0 parts per million.

Federal 8-hour standard is 9.0 parts per million. State 8-hour standard is 9.0 parts per million.

As mentioned above, LSTs have been developed by the SCAQMD to determine maximum allowable concentrations of criteria air pollutants during construction of the proposed project. LSTs have been established by the SCAQMD only for construction of projects and do not apply to emissions during operation. For projects greater than 5 acres in total area, dispersion modeling is done to determine worst-case pollutant concentration at sensitive receptors associated with construction of the project. For the reduced alternative, the largest single day emissions of NO_x, PM₁₀, and PM_{2.5} would result in identical emissions rates when compared to similar pollutants from Option 2 of the proposed project. Although the CO emissions estimated for the reduced alternative are less than those identified for Option 2, this pollutant was not found to exceed localized significance thresholds as established by the SCAQMD.

Therefore, the significance determination made for NO_x, PM₁₀, and PM_{2.5} under Option 2 of the proposed project would also apply to the reduced alternative. As shown in Table 4.2-9 of the DEIR, localized NO₂ 1-hour concentrations and PM₁₀ 24-hour concentrations would not exceed SCAQMD thresholds during project construction at any of the identified sensitive receptors. However, the reduced alternative would exceed the SCAQMD threshold for PM_{2.5} emissions during project construction. Implementation of the identified City code requirements and mitigation measures (identified for the proposed project) would reduce this impact, but not to a less-than-significant level. The closest sensitive receptors to the project site that would be exposed to elevated levels of PM_{2.5} would be the residential uses to the south of the project site and the Old World Village residents and the Seawind Village apartment complex located 480 feet to the north of the project site. People at these sites could be exposed to criteria pollutant concentrations which exceed the SCAQMD's localized significance thresholds. As no further feasible mitigation is available to reduce these concentrations during construction, this impact would be significant and unavoidable, similar to the proposed project.

Implementation of the reduced alternative project would generate greenhouse gases through the construction and operation of new residential and commercial uses. Greenhouse gas emissions from the project would specifically arise from project construction and from sources associated with project operation, including direct sources such as motor vehicles, natural gas consumption, solid waste handling/treatment, and indirect sources such as electricity generation. Emissions from these sources are estimated and presented below.

Construction and operation of the reduced alternative would contribute to greenhouse gas emissions. However, due to the type and size of the alternative, in addition to design features and greenhouse gas emission reduction measures incorporated into the alternative, this cumulative impact would be considered less than significant. Construction of the reduced alternative is estimated to last approximately forty-one months. During that time, demolition, grading, and building construction would occur. Construction of the reduced alternative would result in greenhouse gas emissions, particularly CO₂. Table 6-5 (Estimated CO₂ Construction Emissions, 2009–2012) identifies the amount of CO₂ that is estimated to be produced during construction.

Table 6-5 Estimated CO₂ Construction Emissions, 2009–2012	
<i>Construction Activity</i>	<i>Tons CO₂ Produced</i>
Demolition (2009)	420.61
Mass Grading (2009 and 2010)	264.47
Trenching (2010)	268.85
Building (2010 thru 2012)	3,980.54
Paving (2012)	27.39
Coating (2012)	35.25
<i>Total CO₂ Project Construction Emissions</i>	<i>4,997.11</i>
SOURCE: URBEMIS 2007 (output data is provided in Appendix B)	

Operation of the reduced alternative would also contribute to the annual tons of greenhouse gases emitted from the City of Huntington Beach. Operational emissions would primarily result from mobile sources, particularly motor vehicles traveling to and from the site. Other emissions would result from stationary sources used at the project site. These could include natural gas combustion for heating and electricity consumption. Area (stationary) source emissions during operation are anticipated to result in 1,522 tons of CO₂ per year. The reduced alternative would also result in an estimated 14,565 tons of CO₂ on an annual basis as a result of mobile emissions. Table 6-6 (Estimated CO₂ Operational Emissions [per Year]) compares the CO₂ estimated to be emitted through stationary and mobile sources from the reduced alternative to the total tons of CO₂ emitted by the State of California in 2004.

Table 6-6 Estimated CO₂ Operational Emissions (per Year)

<i>Geographic Region and Emissions Source</i>	<i>CO₂ (tons)</i>
State of California (2004)	484,400,000
Project	16,087

SOURCE: PBS&J, 2008. URBEMIS 2007 (output data is provided in Appendix B)
California Air Resource Boards. Inventory from 1990 to 2004. Available at: <http://www.arb.ca.gov/cc/inventory/data/data.htm>
Accessed May 16, 2008.

The reduced alternative would contribute less than 0.003 percent of the State's 2004 CO₂ emissions. As identified above, the alternative is estimated to generate (worst-case scenario) approximately 16,087 tons of CO₂ each year. The reduced alternative would also comply with the rules and policies outlined in Table 4.2-15 of the EIR. Therefore, operation of the reduced alternative is anticipated to have a less-than-significant impact on climate change as it would introduce a negligible increase in the cumulative sphere of climate change emissions, similar to the proposed project.

Overall, air quality impacts anticipated under the reduced alternative would be similar to the proposed project.

Cultural Resources

Impacts to cultural resources under the reduced project alternative would be substantially similar to those identified for the proposed project. There are no historic resources located on the project site; therefore, no impact to historical resources would occur with implementation of the reduced alternative. Additionally, because similar construction activities would take place under the reduced alternative as compared to the proposed project, potential impacts to subsurface archeological and paleontological resources would also be the same. Construction activities could potentially disturb previously unknown cultural resources within the project site, including human remains. This would occur specifically during the grading and trenching phases of construction. Despite the reduction in project size when compared to the proposed project options, the reduced alternative would result in grading of the entire site. Project requirements and mitigation measures incorporated into the proposed project would ensure that this impact would be less than significant. Development under the reduced alternative would be required to adhere to the policies of the General Plan and Municipal Code requirements with regard to cultural resources as well as those measures identified for the proposed project. Therefore, similar to the proposed project, cultural resource impacts from the reduced alternative would be less than significant.

Geology and Soils

Similar to the proposed project, the reduced alternative could expose people and/or structures to potentially substantial adverse effects resulting from strong seismic groundshaking or seismic-related ground failure. All impacts associated with geological and soil impacts that were identified for the proposed project would also apply to the reduced alternative. The risks to people and structures would not be increased regardless of the size of the development, as adherence to these regulations would assure seismic safety to the greatest extent possible. This reduced alternative could result in soil erosion,

but would not result in the loss of topsoil. As part of the project, a site-specific Stormwater Pollution Prevention Plan, which is part of the NPDES Municipal General Permit, would be prepared for development under this alternative. Construction and building of the residential and retail uses would follow all established policies and codes. Through compliance with federal, State, and local regulations related to seismic safety, impacts would remain less than significant. Therefore, impacts associated with geology and soils would be similar to the proposed project and would result in a less-than-significant impact.

Hazards and Hazardous Materials

Although the intensity of development under the reduced alternative would be less than that identified for the proposed project, potential impacts with respect to hazards and hazardous materials would be similar because the types of uses would remain the same and similar construction activities would take place on site. Construction under the reduced alternative would involve the use of hazardous materials, specifically in the form of diesel fuel. Project construction could expose construction workers to significant health and safety hazards through earthmoving activities that could result in the release of hazardous materials to the environment through reasonably foreseeable upset and accident conditions. Implementation of the identified mitigation measures would reduce this impact to a less-than-significant level, similar to the proposed project. Operation of the residential and commercial uses under the reduced alternative could involve the use of hazardous materials in the form of basic household cleaning materials and landscaping chemicals. Overall, the reduced alternative would result in similar, although slightly lower impacts with respect to hazards and hazardous materials as compared to the proposed project due to the overall reduction in size. Therefore, impacts would be less than significant.

Hydrology and Water Quality

As this alternative is located on the same site as the proposed project, no impact would occur with respect to exposing people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dams. No impact would occur with respect to the depletion of groundwater resources, nor would the alternative substantially alter the existing drainage pattern of the site or area. As identified for the proposed project, this reduced alternative would not expose people or structures to a significant risk of loss, injury, or death involving inundation by seiche, tsunami, or mudflow nor would it result in substantial degradation of water quality. No impact would occur, similar to the proposed project.

Construction and operation of the reduced alternative could increase stormwater pollutant loads or concentrations, which could result in a violation of waste discharge requirements or water quality standards and provide substantial additional sources of polluted runoff. As identified for the proposed project, construction activities occurring under this reduced alternative would be required to follow all existing regulatory requirements as identified for the proposed project. By following all the requirements identified for the proposed project, the reduced alternative would result in a less-than-significant impact during construction. Further, the project site is currently developed with impervious material. Operation of this alternative would be required to follow the best management practices identified for the proposed project. Additionally, the mitigation measures identified for the proposed project requiring the Applicant

to prepare a site-specific Water Quality Management Plan would also apply to development under this reduced alternative. Therefore, operation of the reduced alternative would result in a less-than-significant impact, similar to the proposed project.

Similar to the proposed project, construction of the reduced alternative would require groundwater dewatering for a subterranean garage. This impact would be temporary and less than significant, similar to the proposed project. Construction and operation would not result in a significant impact with respect to substantially altering the existing drainage pattern of the project site. Construction of the reduced alternative would require a City grading permit, erosion control plans, and other requirements as identified for the proposed project. Once operational, this alternative would not result in significant changes to the drainage patterns of the site, as it is currently developed with impervious materials. This impact would be less than significant, similar to the proposed project.

The project site is currently flat and about 90 percent impervious surfaces that drain as sheet flow to local streets to underground storm drains to the Murdy Channel. The reduced alternative would not substantially change the amount of impervious material on the site. However, this alternative, like the proposed project, may substantially alter the project site drainage by grading to change drainage direction, infrastructure alterations that could alter drainage areas, and changes to the amount of impervious surfaces draining to Edinger Avenue. However, mitigation measure MM4.7-2, identified for the proposed project, would be applied to this reduced alternative. This measure would require the Applicant to prepare a hydrology and hydraulics study and City-approved project drainage plan and to reduce peak runoff rates for the design storm events to existing conditions levels. Implementation of the identified mitigation measure would reduce the potential for flooding and storm conveyance capacity to less-than-significant levels, similar to the proposed project.

The project site is located within a 100-year flood plan. As a result, the reduced alternative would be required to follow the identified requirements for the proposed project. All residential uses must be developed at least 2 feet above the existing grading line, 1 foot above for FEMA, and one additional foot above as required by Chapter 222 of the HB Zoning and Subdivision Ordinance. All nonresidential structures, including utilities and sanitary facilities must be elevated or flood-proofed to below the flood depth and capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy as required by Chapter 222 of the HB Zoning and Subdivision Ordinance. By following these standards, the reduced alternative would result in a less-than-significant impact, similar to the proposed project.

This alternative, similar to the proposed project, would include construction activities that could contribute additional sources of polluted runoff to the storm drain system. However, existing regulatory requirements would ensure that construction of new or expanded stormwater drainage facilities would not result in substantial environmental effects and potential impacts would be less than significant, similar to the proposed project.

Land Use

Implementation of the reduced alternative would result in similar impacts as the proposed project. The reduced alternative would require a GPA/ZTA to allow denser development than what is currently

allowed under the existing General Plan, similar to the proposed project. This reduced alternative would result in the development of 583 residential units and 138,085 sf of commercial space. This alternative would, therefore, result in lower overall development compared to the proposed project. Therefore, the analysis identified for the proposed project would apply to the reduced alternative. Land use impacts would be the same as those identified for the proposed project, resulting in a less-than-significant impact.

Noise

Implementation of the reduced alternative would involve the construction of a mixed-use development consisting of 538 residential units and 138,085 sf of retail space. Construction would involve the demolition of the existing 208,700 sf commercial use at the site, along with excavation, pile driving for structural foundations, and construction of the residential and commercial uses, all of which would involve the use of heavy equipment. Construction activities would also involve the use of smaller power tools, generators, and other equipment that are sources of noise. Haul trucks using the local roadways would generate noise as they move along the road. Construction would occur in five phases, lasting a total of 35 months. Each stage of construction would involve a different mix of operating equipment, and noise levels would vary based on the amount and types of equipment in operation and the location of the activity.

Although the reduced alternative would have a reduced project footprint when compared to the proposed project, construction noise levels from the reduced alternative would be similar to those analyzed under the proposed project. The same equipment mix and construction techniques would be utilized as the proposed project; and the activities that generate the greatest noise levels would last for approximately the same amount of time. Additionally, most of the types of exterior construction activities associated with the proposed project would not generate continuously high noise levels, although occasional single-event disturbances from grading and external building construction are possible. Compliance with the identified City code requirements and implementation of identified mitigation measures would reduce this impact, but noise levels could still be substantial; however, construction noise impacts would be temporary, would not occur during recognized sleep hours, and are consistent with the exemption for construction noise that exists in Section 8.40.090(d) (Special Provisions) of Chapter 8.40 of the City's *Municipal Code*. Therefore, this impact would be less than significant, similar to the proposed project.

Operation of this reduced alternative would not expose noise-sensitive land uses on or off site to noise levels that exceed the standards established by the City of Huntington Beach. Therefore, this impact would be less than significant.

The footprint for this reduced alternative would be less than the proposed project and would not increase the potential for exposure to construction vibration for off-site land uses over that of the proposed project. Given the distance between the site and adjacent sensitive land uses, natural attenuation would reduce vibration impacts. Construction activities associated with this alternative would not generate or expose persons or structures off site to excessive groundborne vibration. This impact would be less than significant.

Operation of this reduced alternative would not generate and expose sensitive receptors on or off site to excessive groundborne vibration or groundborne noise levels. Groundborne vibration resulting from operation of this reduced alternative would primarily be generated by trucks making periodic deliveries to the site, which is consistent with deliveries that are currently made along roadways in the project vicinity to nearby commercial uses, and no substantial sources of groundborne vibration would be built as part of this alternative. This would be a less-than-significant impact.

Operation of the reduced alternative would generate local traffic as a result of residents, employees, and patrons entering and exiting the site. As shown in Table 6-7 (Current and Future Roadway Noise Levels Off Site), existing roadway noise levels were compared to future roadway noise projections without the project (2030) and future roadway noise projections with the reduced alternative (2030).

Table 6-7 Current and Future Roadway Noise Levels Off Site								
<i>Roadway</i>	<i>Segment</i>	<i>Existing Land Use</i>	<i>Noise Levels in dBA L_{dn}</i>					
			<i>Existing</i>	<i>Cumulative Year 2030 Without Project</i>	<i>Cumulative Year 2030 Without Project Increase</i>	<i>Year 2030 With Reduced GPA Alternative</i>	<i>Project Related Increase</i>	<i>Significance</i>
Goldenwest Avenue	North of Bolsa Avenue	Commercial	71.9	72.5	0.6	72.5	0.0	No
Goldenwest Avenue	South of Bolsa Avenue	Commercial	71.8	72.4	0.6	72.4	0.0	No
Goldenwest Avenue	North of McFadden Avenue	Commercial	71.2	71.9	0.7	71.9	0.0	No
Goldenwest Avenue	South of McFadden Avenue	Residential	71.1	71.8	0.7	71.8	0.0	No
Gothard Street	South of McFadden Avenue	Institutional/Vacant	65.4	66.4	1.0	66.3	-0.1	No
Gothard Street	North of Center Avenue	Institutional/Commercial	65.2	66.1	0.9	66.0	-0.1	No
Gothard Street	South of Center Avenue	Institutional/Commercial	65.3	65.6	0.3	65.5	-0.1	No
Beach Boulevard	North of Center Avenue	Commercial	74.2	75.0	0.8	75.0	0.0	No
Beach Boulevard	South of Center Avenue	Commercial	74.2	74.8	0.6	74.8	0.0	No
Goldenwest Avenue	North of Edinger Avenue	Commercial	70.4	71.0	0.6	71.0	0.0	No
Goldenwest Avenue	South of Edinger Avenue	Commercial	70.2	70.6	0.4	70.5	-0.1	No
Gothard Street	North of Edinger Avenue	Commercial	66.0	66.1	0.1	66.3	0.2	No
Gothard Street	South of Edinger Avenue	Commercial	66.4	67.0	0.6	67.0	0.0	No
Beach Boulevard	North of Edinger Avenue	Commercial	74.5	75.2	0.7	75.1	-0.1	No

Table 6-7 Current and Future Roadway Noise Levels Off Site

Roadway	Segment	Existing Land Use	Noise Levels in dBA L _{dn}					
			Existing	Cumulative Year 2030 Without Project	Cumulative Year 2030 Without Project Increase	Year 2030 With Reduced GPA Alternative	Project Related Increase	Significance
Beach Boulevard	South of Edinger Avenue	Commercial	74.5	74.9	0.4	74.9	0.0	No
Newland Street	North of Edinger Avenue	Residential	67.9	69.0	1.1	68.9	-0.1	No
Newland Street	South of Edinger Avenue	Residential	67.9	68.8	0.9	68.8	0.0	No
Gothard Street	North of Heil Avenue	Commercial	66.2	66.9	0.7	66.8	-0.1	No
Gothard Street	South of Heil Avenue	Commercial	67.2	68.0	0.8	67.6	-0.4	No
Beach Boulevard	North of Heil Avenue	Commercial	74.0	74.5	0.5	74.5	0.0	No
Beach Boulevard	South of Heil Avenue	Commercial	74.0	74.3	0.3	74.3	0.0	No
Newland Street	North of Heil Avenue	Residential	64.3	65.1	0.8	65.1	0.0	No
Newland Street	South of Heil Avenue	Residential	64.3	65.1	0.8	65.0	-0.1	No
Gothard Street	North of Warner Avenue	Commercial/Residential	67.2	67.9	0.7	67.9	0.0	No
Gothard Street	South of Warner Avenue	Commercial	66.9	67.5	0.6	67.5	0.0	No
Beach Boulevard	North of Warner Avenue	Commercial	74.1	74.4	0.3	74.4	0.0	No
Beach Boulevard	South of Warner Avenue	Commercial	74.0	74.2	0.2	74.2	0.0	No
Newland Street	North of Warner Avenue	Commercial/Residential	67.1	67.8	0.7	67.8	0.0	No
Newland Street	South of Warner Avenue	Commercial/Residential	65.4	66.1	0.7	66.1	0.0	No
Beach Boulevard	North of McFadden Avenue	Commercial	73.9	74.7	0.8	74.6	-0.1	No
Beach Boulevard	South of McFadden Avenue	Commercial	73.9	74.7	0.8	74.7	0.0	No
Beach Boulevard	North of Bolsa Avenue	Commercial/Residential	74.0	74.8	0.8	74.8	0.0	No
Beach Boulevard	South of Bolsa Avenue	Commercial	74.0	74.7	0.7	74.7	0.0	No
Beach Boulevard	North of Hazard Avenue	Commercial/Recreation	73.2	74.0	0.8	74.0	0.0	No

Table 6-7 Current and Future Roadway Noise Levels Off Site

Roadway	Segment	Existing Land Use	Noise Levels in dBA L _{dn}					
			Existing	Cumulative Year 2030 Without Project	Cumulative Year 2030 Without Project Increase	Year 2030 With Reduced GPA Alternative	Project Related Increase	Significance
Beach Boulevard	South of Hazard Avenue	Commercial/ Recreation	73.1	73.9	0.8	73.9	0.0	No
Magnolia Street	North of Edinger Avenue	Residential	68.4	69.0	0.6	69.0	0.0	No
Magnolia Street	South of Edinger Avenue	Residential	68.4	69.1	0.7	69.1	0.0	No
Bolsa Avenue	West of Goldenwest Avenue	Commercial	69.2	70.3	1.1	70.4	0.1	No
Bolsa Avenue	East of Goldenwest Avenue	Commercial	70.2	71.5	1.3	71.5	0.0	No
McFadden Avenue	West of Goldenwest Avenue	Residential	67.3	67.5	0.2	67.5	0.0	No
McFadden Avenue	East of Goldenwest Avenue	Residential/ Commercial	68.2	68.2	0.0	68.4	0.2	No
McFadden Avenue	West of Gothard Street	Residential/ Institutional	68.4	68.5	0.1	68.4	-0.1	No
McFadden Avenue	East of Gothard Street	Vacant/ Commercial	66.9	67.6	0.7	67.5	-0.1	No
Center Avenue	West of Gothard Street	Institutional	54.6	56.0	1.4	56.0	0.0	No
Center Avenue	East of Gothard Street	Commercial	60.7	62.1	1.4	61.9	-0.2	No
Center Avenue	West of Beach Boulevard	Commercial	65.7	66.5	0.8	66.4	-0.1	No
Edinger Avenue	West of Goldenwest Avenue	Commercial/ Residential	67.4	68.4	1.0	68.4	0.0	No
Edinger Avenue	East of Goldenwest Avenue	Institutional/ Commercial	67.7	68.6	0.9	68.6	0.0	No
Edinger Avenue	West of Gothard Street	Commercial	68.7	69.4	0.7	69.4	0.0	No
Edinger Avenue	East of Gothard Street	Commercial	68.8	69.5	0.7	69.5	0.0	No
Edinger Avenue	West of Beach Boulevard	Commercial	69.5	70.4	0.9	70.3	-0.1	No
Edinger Avenue	East of Beach Boulevard	Commercial	68.5	69.2	0.7	69.1	-0.1	No

Table 6-7 Current and Future Roadway Noise Levels Off Site

Roadway	Segment	Existing Land Use	Noise Levels in dBA L _{dn}					
			Existing	Cumulative Year 2030 Without Project	Cumulative Year 2030 Without Project Increase	Year 2030 With Reduced GPA Alternative	Project Related Increase	Significance
Edinger Avenue	West of Newland Street	Residential	66.7	67.4	0.7	67.4	0.0	No
Edinger Avenue	East of Newland Street	Residential	67.0	67.9	0.9	67.9	0.0	No
Heil Avenue	West of Gothard Street	Commercial/Residential	66.5	67.6	1.1	67.5	-0.1	No
Heil Avenue	East of Gothard Street	Commercial	66.0	67.6	1.6	67.6	0.0	No
Heil Avenue	West of Beach Boulevard	Residential	65.1	66.9	1.8	66.9	0.0	No
Heil Avenue	East of Beach Boulevard	Commercial/Residential	63.5	65.2	1.7	65.2	0.0	No
Heil Street	West of Newland Street	Residential	61.4	62.6	1.2	62.6	0.0	No
Heil Street	East of Newland Street	Residential	56.6	57.1	0.5	57.1	0.0	No
Warner Avenue	West of Gothard Street	Commercial/Residential	71.3	71.8	0.5	71.8	0.0	No
Warner Avenue	East of Gothard Street	Commercial	70.7	71.2	0.5	71.2	0.0	No
Warner Avenue	West of Beach Boulevard	Commercial	71.4	71.8	0.4	71.7	-0.1	No
Warner Avenue	East of Beach Boulevard	Commercial/Residential	70.8	71.3	0.5	71.3	0.0	No
Warner Avenue	West of Newland Street	Commercial/Residential	69.2	69.6	0.4	69.6	0.0	No
Warner Avenue	East of Newland Street	Commercial/Residential	69.4	70.2	0.8	70.2	0.0	No
McFadden Avenue	West of Beach Boulevard	Commercial/Residential	67.2	67.7	0.5	67.7	0.0	No
McFadden Avenue	East of Beach Boulevard	Commercial	67.3	68.0	0.7	68.0	0.0	No
Bolsa Avenue	West of Beach Boulevard	Residential	67.5	69.0	1.5	69.0	0.0	No
Bolsa Avenue	East of Beach Boulevard	Commercial/Residential	66.9	67.8	0.9	67.8	0.0	No
Hazard Avenue	West of Beach Boulevard	Commercial/Recreation	66.8	66.7	-0.1	66.7	0.0	No
Hazard Avenue	East of Beach Boulevard	Commercial/Recreation	66.5	67.1	0.6	67.1	0.0	No

Table 6-7 Current and Future Roadway Noise Levels Off Site

Roadway	Segment	Existing Land Use	Noise Levels in dBA L_{dn}					
			Existing	Cumulative Year 2030 Without Project	Cumulative Year 2030 Without Project Increase	Year 2030 With Reduced GPA Alternative	Project Related Increase	Significance
Edinger Avenue	West of Magnolia Street	Residential	67.3	68.0	0.7	68.0	0.0	No
Edinger Avenue	East of Magnolia Street	Residential	67.4	68.0	0.6	67.9	-0.1	No

SOURCE: PBS&J 2008. Calculation data and results are provided in Appendix B.

NB = northbound, SB = southbound, WB = westbound, EB = eastbound

As identified above, the majority of the study roadway segments would not experience an increase in noise levels due to the proposed project traffic volumes, while the greatest increase between Cumulative Year 2030 Without Project and Year 2030 with reduced alternative roadway generated noise levels would occur at Gothard Street, north of Edinger Avenue and McFadden Avenue east of Goldenwest Avenue. Noise in these areas is projected to increase by 0.2 dBA as a result of the reduced alternative. This increase would be inaudible/imperceptible to most people and would not exceed the identified threshold of significance. Therefore, this impact would be considered less than significant, similar to the proposed project.

Construction activities occurring within the project site would involve demolition, grading, and excavation activities, followed by construction and external finishing of the proposed facilities and associated parking areas, as well as roadway and landscaping improvements. These activities would involve the use of heavy equipment. Construction activities would also involve the use of smaller power tools, generators, and other equipment that generates noise. Each stage of construction would use a different mix of equipment, and noise levels would vary based on the amount and types of equipment in operation and the location of the activity related to potential receptors.

Under Section 8.40.090(d) (Special Provisions) of Chapter 8.40 of the City's *Municipal Code*, noise sources associated with construction are exempt from the requirements of the Municipal Code, provided that construction activities do not occur between the hours of 8:00 P.M. and 7:00 A.M. on weekdays, including Saturday, or at any time on Sunday or a federal holiday. Additionally, mitigation measures MM4.9-1, MM4.9-2, and MM4.9-3 have been identified to minimize or reduce construction related noise levels to the extent feasible. However, as identified in Section 4.9 (Noise) of the EIR, pile driving activities associated with the proposed project, as well as under this alternative, could generate noise levels of 91 dBA at the residential uses of the Old World Village located approximately 285 feet to the north of the project site. The construction contractor would be required to implement noise attenuation measures during pile driving activities, including but not limited to the utilization of noise blankets, which would reduce noise levels up to 10 dBA. However, pile driving activities would last for approximately 6 months, and therefore, this temporary increase in ambient noise levels would be noticeable and would likely be cause for human annoyance. Despite identified mitigation measures, pile driving would result in a significant temporary noise increase generating noise levels that are significantly greater than existing

noise levels from the site. Implementation of the above mentioned mitigation measures would reduce the noise levels associated with impact pile driving activities, but not to a level of less than significant. Therefore, construction related temporary increases in ambient noise levels would be considered significant and unavoidable, similar to the proposed project.

Population and Housing

Future development under the reduced alternative would result in a mixed-use residential and commercial development that would consist of up to 538 residential units and up to 138,085 sf of commercial uses. Based on the City's existing pph size of 2.65, the residential component of the reduced alternative would most likely generate approximately 1,426 residents. As implementation of the reduced alternative would result in the same amount of residential units as proposed under Option 2 of the project, the same impact analysis applies to this alternative. Residential build out under the reduced alternative would account for approximately 10 percent of the anticipated growth between 2008 and 2015, or approximately 0.66 percent of the City's projected 2015 population, assuming full occupancy.

Compared to the existing General Plan designation, the reduced project alternative would represent an increase of 142 residential units. Therefore, full build-out under the proposed project would exceed previously projected population growth for the project site by approximately 377 persons. However, the project would provide needed housing to the City and the region, contributing to the City's progress towards meeting its RHNA numbers. As shown in Table 4.10-1, SCAG predicts that the population and households would continue to increase from 2005 to 2030, and the project is consistent with this pattern. As discussed in Section 4.10 (Population and Housing) of the EIR, the City's actual population increase has been below those projected by SCAG as well as the populations projected by the Department of Finance. Therefore, the growth anticipated as part of the proposed project would fall well below the SCAG projections for population within the City of Huntington Beach. Because the potential population increase that could result from the reduced alternative would not result in growth as identified by the City's Housing Element or in SCAG projections that could not be accommodated, impacts would be less than significant, similar to the proposed project.

The proposed housing units under the reduced alternative would be provided at market rate and would be priced in the "Above Moderate" income group. The existing RHNA numbers would be applicable to the project upon completion of construction and the reduced alternative would contribute up to 538 residential units to the housing needs in the City. The provision of "Above Moderate" housing on site would not impede the ability of the City to meet the RHNA allocation for very low-, low-, and moderate-income housing.

In addition, similar to the proposed project, development under the reduced alternative would include the affordable housing units consistent with City code requirements, as required by CR4.10-1. This would ensure compliance with City code requirements for affordable housing and would contribute to the City meeting its RHNA allocation. This impact would remain less than significant, similar to the proposed project.

Public Services

The HBFD currently maintains this response time with existing facilities, equipment and staffing, and has indicated that future development would not significantly impact the level of service delivery for the project area. The person-to-population ration of sworn positions in the HBFD per every 1,000 residents is 0.67. Future development of the reduced alternative would result in a direct population increase of up to 1,426 persons. The City has a total of 135 sworn personnel and 51 civilian positions, and the addition of the new residents generated by the project would reduce the present firefighter personnel-to-population ratio by less than 2 percent. Therefore, implementation of the reduced alternative would not require any new or physically altered fire facilities to maintain adequate response times and staffing, the construction of which could result in significant environmental impacts. This impact would be less than significant, similar to the proposed project.

Additionally, all development plans are reviewed by the HBFD prior to construction to ensure that adequate fire flows would be maintained and that an adequate number of fire hydrants would be provided in the appropriate locations in compliance with the *California Fire Code*. Adequate fire flows would be required by law prior to construction and the proposed project will be equipped with water distribution infrastructure. As such, impacts associated with the provision of fire protection services are considered less than significant and no mitigation is required.

For police services, the Growth Management Element of the General Plan has established a target ratio of 1.2 officers per 1,000 residents as a minimal standard. The current ratio is slightly below the target at 1.08 officers per 1,000 residents. Currently, there are 218 sworn personnel protecting 201,993 residents in the City. Implementation of the Reduced Alternative could result in up to 1,426 new residents, which would decrease the current ratio slightly to 1.07 officers per 1,000 residents. Security concerns related to the proposed uses would be addressed through the permit process, at which time the HBPD would have the opportunity to review the proposed uses and provide input on necessary security measures. Implementation of MM4.11-1, identified for the proposed project, would ensure the safety of residents of future development. The number of calls from the project site in the future context of the City with a population of 203,419 residents would not substantially affect the level of police protection and service provided by the HBPD. Similar to the proposed project, with implementation mitigation measures MM4.11-1, impacts would remain less than significant and no additional officers would be required to ensure the public safety of persons at the project site.

Utilizing the student generation rates identified in Section 4.11 (Public Services) of the EIR, the reduced alternative would generate approximately 420 students in grades K–8 and approximately 74 students in grades 9–12. Direct population growth resulting from implementation of the reduced alternative would not have an impact on the capacity of schools within the HBUHSD and OVSD, as all three schools serving the project site are currently operating below maximum capacity. Additionally, both Districts anticipate that the enrollment for its schools will be lower in the upcoming years and will continue to decline in the future. In addition, with the implementation of mitigation measures CR4.11-1 and CR4.11-2, fees collected under the authority of SB 50 would offset any additional increase in educational demand at the elementary school, middle school, and high school serving the project site. Therefore, implementation of the reduced alternative would not require any new or physically altered school

facilities to serve the project, the construction of which could result in significant environmental impacts. This impact would be less than significant, similar to the proposed project.

Based on the City's current population of 201,993 residents, an additional 36 staff members would need to be hired in order to meet to the State's library service ratio standard. As the reduced alternative would only increase the population of Huntington Beach by approximately 1,426 residents; the increase in demand for new staff would only increase by another 0.5 staff member, and therefore, would not be substantial. Implementation of the reduced alternative would place a higher demand on services provided by the Huntington Beach Library System, but would be less than those identified for the proposed project. As the demand for additional full-time employees would not increase as a result of the increase in population, the reduced alternative would not negatively affect the Huntington Beach Public Library system under current conditions. Implementation of CR4.11-3, identified for the proposed project would be required to ensure that additional residents would not notably affect the current ratio of staff per resident or items per capita. While the existing library facilities are reasonably adequate to accommodate the increase in users from the reduced alternative, implementation of CR4.11-3 would ensure that the increased growth would be adequately planned for in advance of project development. Therefore, implementation of the reduced alternative would not require any new or physically altered library facilities to serve the project, the construction of which could result in significant environmental impacts. This impact would be less than significant.

Recreation

Implementation of the reduced alternative would result in the development of up to 538 residential units, which would directly increase the population on site by approximately 1,426 residents. As implementation of the reduced alternative would result in the same amount of residential units as proposed under Option 2 of the project, the same impact analysis applies to this alternative. Construction and operation of the reduced alternative would not interfere with existing nearby recreation opportunities; however, the direct increase in population would result in an increase in the general use of local and regional recreational facilities.

Similar to the proposed project, mitigation measure CR4.12-1 would be required to ensure that future development either dedicates parkland/open space on site or results in they payment of applicable open space and park fees, which would help acquire, develop, improve, and expand the City's open space and parklands inventory. Therefore, with implementation of CR4.12-1, this impact would be reduced to a less-than-significant level, similar to the proposed project.

The construction impacts anticipated to result from future development under the reduced alternative are analyzed throughout issue areas outlined in this Alternatives section of the EIR. As required by CR4.-12-1, future development would be subject to Chapter 254.08, which would require the dedication of land or the payment of in-lieu fees, or both, at the discretion of the City in order to comply with appropriate parkland dedication requirements. Implementation of construction-related applicable code requirements and mitigation measures as described throughout the technical sections of this EIR (Sections 4.01 through 4.14) would help reduce impacts. Therefore, effects of construction activities

associated with development of recreational facilities under this alternative would be less than significant, similar to the proposed project.

Transportation/Traffic

The analysis in this section focuses on the nature and magnitude of the change in transportation and traffic patterns due to implementation of the reduced alternative. The reduced alternative would result in fewer residential units (538) and a reduced square footage of retail space (138,085 sf). Overall, the reduced alternative would result in fewer traffic trips compared to the proposed project, although the level of significance of traffic impacts would be similar. Much of the analysis below draws from the analysis within Section 4.13 of the DEIR. Therefore, Table 4.13-4 thru Table 4.13-6 identified for the proposed project would apply to the reduced alternative.

Table 6-8 (Project Trip Generation Summary) below compares the existing Bella Terra Phase 1 trip generation summary with the reduced alternative.

Table 6-8 Project Trip Generation Summary								
Project Description	Amount	Peak Hour						ADT
		AM			PM			
		In	Out	Total	In	Out	Total	
Existing (Bella Terra Phase I)								
Existing Commercial	694,422 sf	306	195	501	1,080	1,169	2,249	23,933
Internal Capture		—	—	—	65	70	135	957
Pass-by Reduction		—	—	—	216	234	450	4,787
Subtotal		306	195	501	799	865	1,664	18,189
Multiplex Theatres with Matinee	76,740 sf	0	0	0	297	263	560	3,067
Internal Capture		—	—	—	60	53	113	889
Subtotal		0	0	0	237	210	447	2,178
Existing Trip Generation Total		306	195	501	1,036	1,075	2,111	20,367
Reduced Alternative								
Residential	538 du	54	221	275	215	118	333	3,615
Commercial	138,085 sf	34	23	57	137	149	286	2,994
Internal Capture		11	11	22	43	43	86	1,012
Local Capture		4	15	19	9	5	14	145
Pass By Reduction		7	5	12	27	30	57	599
Reduced Alternative Trip Generation Total		66	213	279	273	189	462	4,853

SOURCE: Austin-Foust Associates, Inc. City of Huntington Village at Beach Bella Terra Traffic Analysis. July 2008.

ADT = average daily traffic; du = dwelling unit; sf = square feet

Daily rates based on Institute of Transportation Engineers (ITE) peak to daily relationships for Community Centers

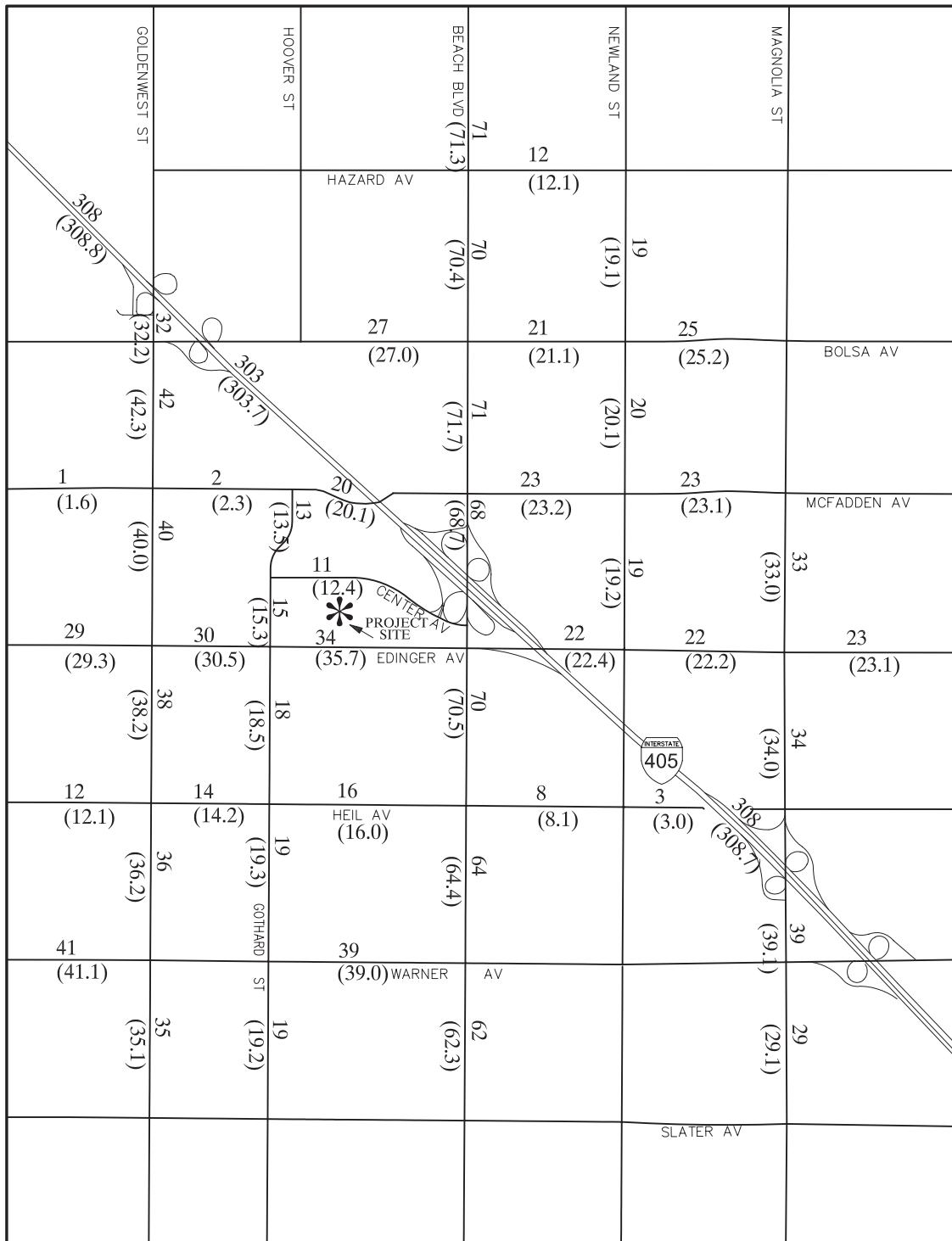
* Trips based on ITE (7th Edition) General Commercial (820) rates with 50 percent reduction for local capture.

** Trips based on ITE (7th Edition) Apartment (220) rates with local capture of 11 percent for the AM peak hour, 17 percent for PM peak hour and 18 percent for ADT.

Short-Range (2014) Conditions

The short-range analysis period for the reduced alternative looks at year 2014. Similar to the proposed project, it is expected that future development under this alternative would be fully occupied by 2014. For the short-range analysis, background (no project) conditions are added to the project-only peak hour intersection volumes. This accounts for ambient growth, including development anticipated to occur in this short-range timeframe. It also addresses the Growth Management Plan (GMP) and the CMP needs for a short-range (five to seven year) time frame. Currently committed roadway improvements at the intersections at Heil Avenue, Beach Boulevard at Heil Avenue, and Beach Boulevard at Edinger Avenue, have been assumed in both the short-range and long-range analysis.

Short-range with project ADT volumes are shown on Figure 6-1 (Year 2014 Study Area ADT Volumes—Reduced Alternative). The highest study area volumes occur on Beach Boulevard and Edinger Avenue. AM and PM peak hour intersection volumes for no-project conditions are shown on Figure 6-2 (Year 2014 AM Peak Hour Volumes—No Project) and Figure 6-3 (Year 2014 PM Peak Hour Volumes—No Project), and with-project AM and PM peak hour intersection volumes are shown on Figure 6-4 (Year 2014 AM Peak Hour Volumes—Reduced Alternative) and Figure 6-5 (Year 2014 PM Peak Hour Volumes—Reduced Alternative). A summary of 2014 traffic conditions with and without the proposed project is shown in Table 6-9 (2014 Level of Service Summary). As identified in this table, three study intersections would operate at unacceptable LOS.



Legend	
XX	No-Project ADT (000s)
(Y.Y)	With-Project ADT (000s)

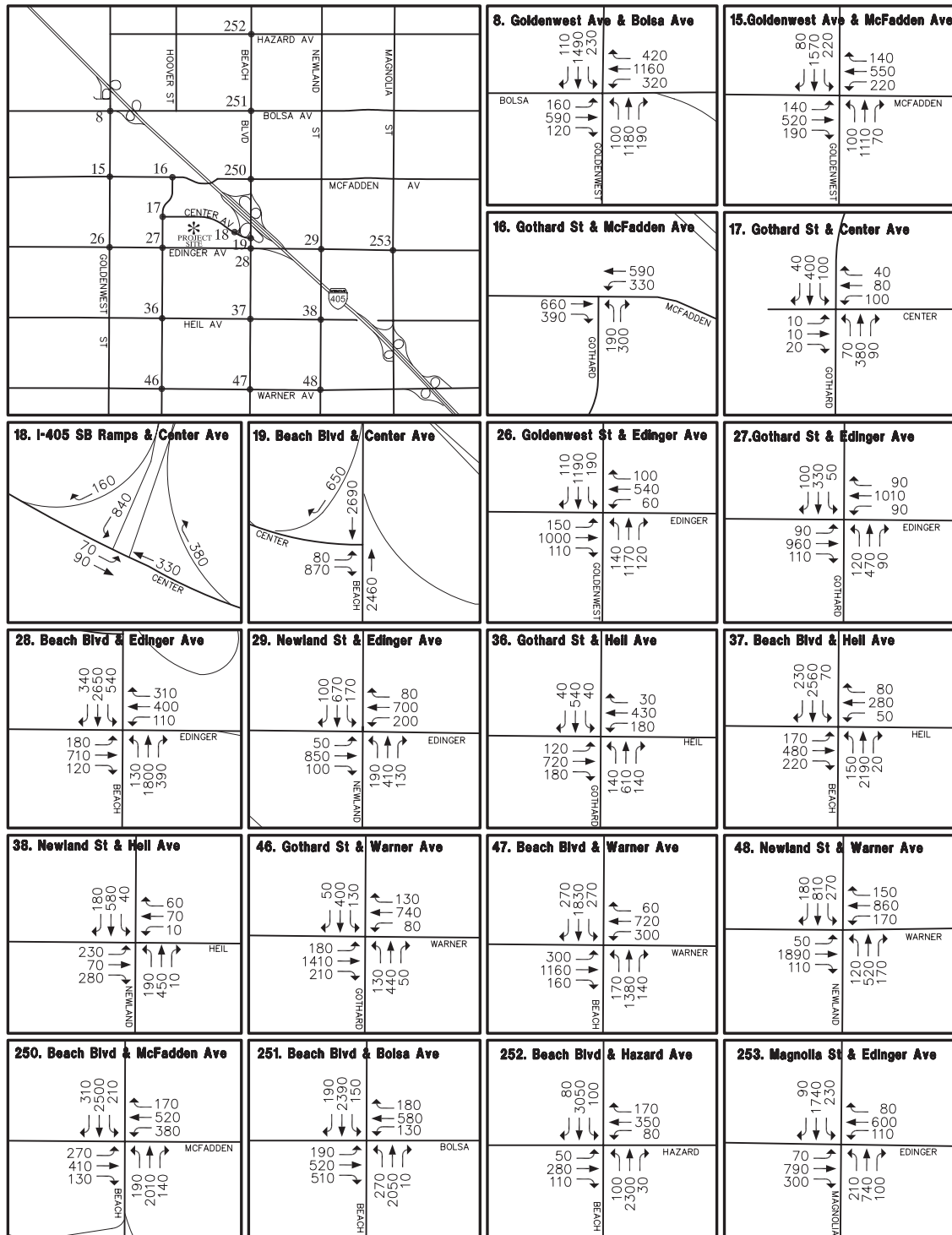


Source: Austin-Foust Associates, Inc., 2008.

FIGURE 6-1
Year 2014 Study Area ADT Volumes – Reduced Alternative

0D2138300

The Village at Bella Terra



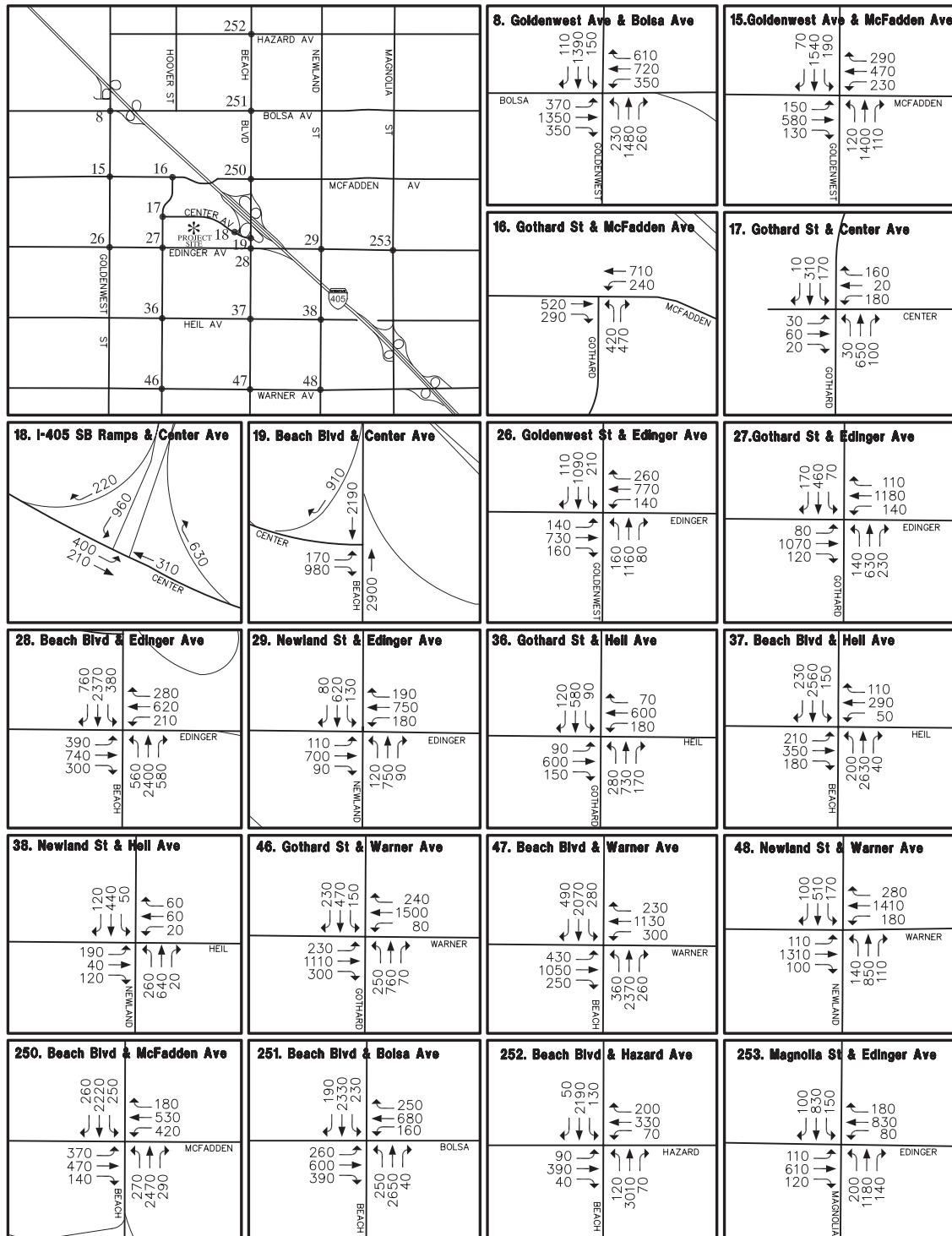
Source: Austin-Foust Associates, Inc., 2008.



FIGURE 6-2
Year 2014 AM Peak Hour Volumes – No Project

0D2138300

The Village at Bella Terra

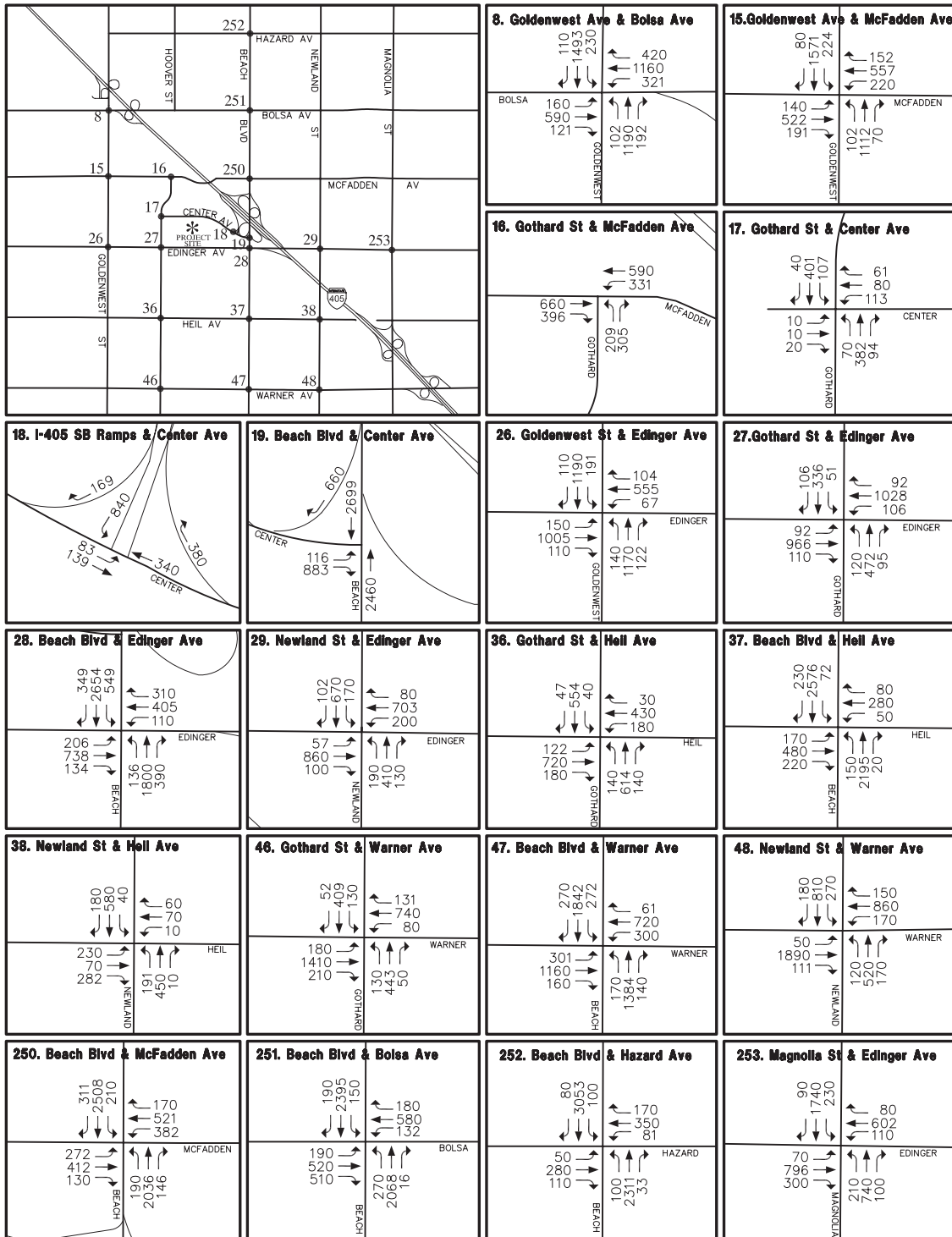


Source: Austin-Foust Associates, Inc., 2008.

FIGURE 6-3
Year 2014 PM Peak Hour Volumes – No Project

0D2138300

The Village at Bella Terra

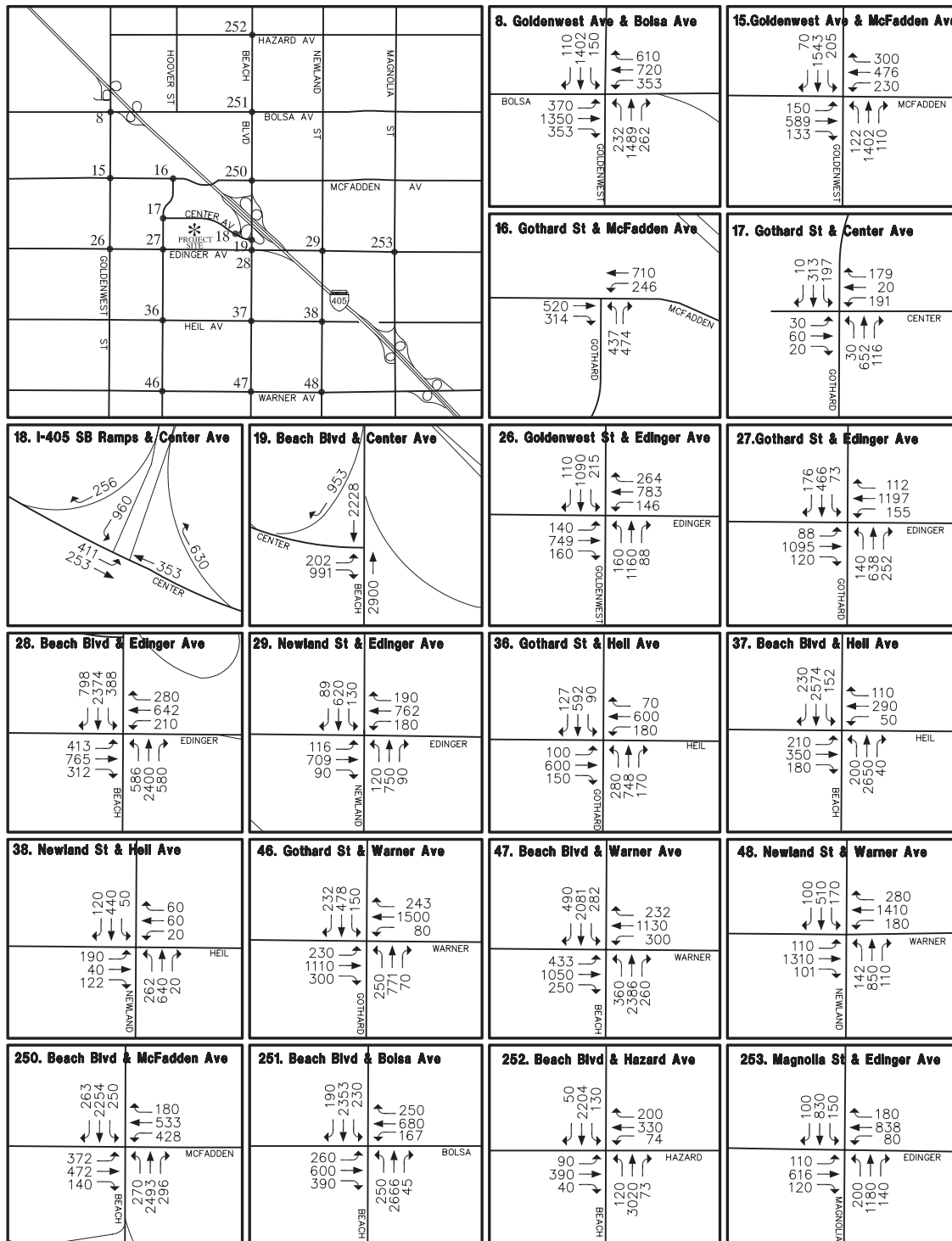


Source: Austin-Foust Associates, Inc., 2008.

FIGURE 6-4
Year 2014 AM Peak Hour Volumes – Reduced Alternative

0D2138300

The Village at Bella Terra



Source: Austin-Foust Associates, Inc., 2008.

FIGURE 6-5
Year 2014 PM Peak Hour Volumes – Reduced Alternative

0D2138300

The Village at Bella Terra

Table 6-9 2014 Level of Service Summary

Location	No-Project				Reduced Alternative			
	AM		PM		AM		PM	
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS
Intersection Capacity Utilization (ICU)								
Goldenwest Street at Bolsa Avenue	.74	C	.91	E	.74	C	.91	E
Goldenwest Street at McFadden Avenue	.71	C	.75	C	.71	C	.75	C
Gothard Street at McFadden Avenue	.52	A	.55	A	.52	A	.55	A
Gothard Street at Center Avenue	.30	A	.50	A	.31	A	.52	A
I-405 SB Ramps at Center Avenue	.44	A	.80	C	.45	A	.80	C
Beach Boulevard at Center Avenue	.71	C	.71	C	.71	C	.72	C
Goldenwest Street at Edinger Avenue	.63	B	.63	B	.63	B	.65	B
Gothard Avenue at Edinger Avenue	.49	A	.58	A	.49	A	.59	A
Beach Boulevard at Edinger Avenue	.73	C	.92	E	.74	C	.94	E
Newland Street at Edinger Avenue	.76	C	.70	B	.76	C	.70	B
Gothard Street at Heil Avenue	.61	B	.67	B	.61	B	.67	B
Beach Boulevard at Heil Avenue	.76	C	.82	D	.76	C	.82	D
Newland Street at Heil Avenue	.55	A	.51	A	.55	A	.51	A
Gothard Street at Warner Avenue	.59	A	.79	C	.59	A	.80	C
Beach Boulevard at Warner Avenue	.72	C	.92	E	.72	C	.92	E
Newland Street at Warner Avenue	.83	D	.87	D	.83	D	.87	D
Beach Boulevard at McFadden Avenue	.80	C	.85	D	.80	C	.85	D
Beach Boulevard at Bolsa Avenue	.85	D	.87	D	.85	D	.87	D
Beach Boulevard at Hazard Avenue	.69	B	.73	C	.69	B	.73	C
Magnolia Street at Edinger Avenue	.80	C	.70	B	.80	C	.71	C

SOURCE: Austin-Foust, Inc. City of Huntington Village at Beach Bella Terra Traffic Analysis. 2008.

Long-Range (2030) Conditions

Year 2030 forecasts were produced using the HBTM. This is a subarea model derived from the Orange County Transportation Analysis Model (OCTAM), following the consistency guidelines established by OCTA. Future committed roadway improvements have been assumed in the long-range analysis. Year 2030 baseline conditions represent ADT volumes under build-out of the City's General Plan and regional growth projections from OCTA. For the project site, the existing land uses are assumed as represented under the current zoning designations.

The project volumes reflect the trip generation differences between the current General Plan and the reduced alternative. With-project year 2030 ADT volumes can be seen in Figure 6-6 (Year 2030 ADT Volumes—Reduced Alternative). No project AM and PM peak hour 2030 intersection volumes are illustrated in Figure 6-7 (Year 2030 AM Peak Hour Volumes—No Project), and Figure 6-8 (Year 2030 PM Peak Hour Volumes—No Project). With-project AM and PM peak hour intersection volumes

shown in Figure 6-9 (Year 2030 AM Peak Hour Volumes—Reduced Alternative) and Figure 6-10 (Year 2030 PM Peak Hour Volumes—Reduced Alternative). Seven intersections show long-range deficiencies (ICU greater than 0.90). Year 2030 ICU Values are summarized on Table 6-10 (2030 ICU Summary).

Table 6-10 2030 ICU Summary								
Location	No-Project				Reduced Alternative			
	AM		PM		AM		PM	
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS
Intersection Capacity Utilization (ICU)								
Goldenwest Street at Bolsa Avenue	.90	D	1.02	F	.90	D	1.02	F
Goldenwest Street at McFadden Avenue	.82	D	.81	D	.82	D	.81	D
Gothard Street at McFadden Avenue	.67	B	.64	B	.66	B	.64	B
Gothard Street at Center Avenue	.36	A	.57	A	.35	A	.56	A
I-405 SB Ramps at Center Avenue	.55	A	.90	D	.55	A	.90	D
Beach Boulevard at Center Avenue	.78	C	.77	C	.78	C	.76	C
Goldenwest Street at Edinger Avenue	.66	B	.70	B	.66	B	.70	B
Gothard Avenue at Edinger Avenue	.55	A	.64	B	.55	A	.63	B
Beach Boulevard at Edinger Avenue	.86	D	1.05	F	.86	D	1.05	F
Newland Street at Edinger Avenue	.87	D	.80	C	.87	D	.80	C
Gothard Street at Heil Avenue	.73	C	.78	C	.73	C	.78	C
Beach Boulevard at Heil Avenue	.83	D	.95	E	.83	D	.95	E
Newland Street at Heil Avenue	.63	B	.63	B	.63	B	.63	B
Gothard Street at Warner Avenue	.65	B	.84	D	.65	B	.84	D
Beach Boulevard at Warner Avenue	.78	C	.96	E	.78	C	.95	E
Newland Street at Warner Avenue	.88	D	.92	E	.88	D	.92	E
Beach Boulevard at McFadden Avenue	.91	E	.95	E	.91	E	.94	E
Beach Boulevard at Bolsa Avenue	.96	E	1.06	F	.96	E	1.05	F
Beach Boulevard at Hazard Avenue	.80	C	.83	D	.80	C	.83	D
Magnolia Street at Edinger Avenue	.88	D	.78	C	.88	D	.78	C
SOURCE: Austin-Foust, Inc. City of Huntington Beach Bella Terra Traffic Analysis. 2008.								

Freeway Ramp Volumes

A summary of the 2014 and 2030 peak hour volumes and volume/capacity (V/C) ratios for freeway ramps that would be affected by the proposed project are summarized on Table 6-11 (Future Freeway Ramp V/C Summary—Reduced Alternative).

Caltrans Intersections

A LOS analysis for 2014 and 2030 was carried out for the Caltrans intersections in the study area using the HCM methodology as described in Chapter 1.0 of the traffic study. The results are summarized in Table 6-12 (LOS Summary for Caltrans Intersections—Reduced Alternative) for the reduced alternative.

Table 6-11 Future Freeway Ramp V/C Summary—Reduced Alternative

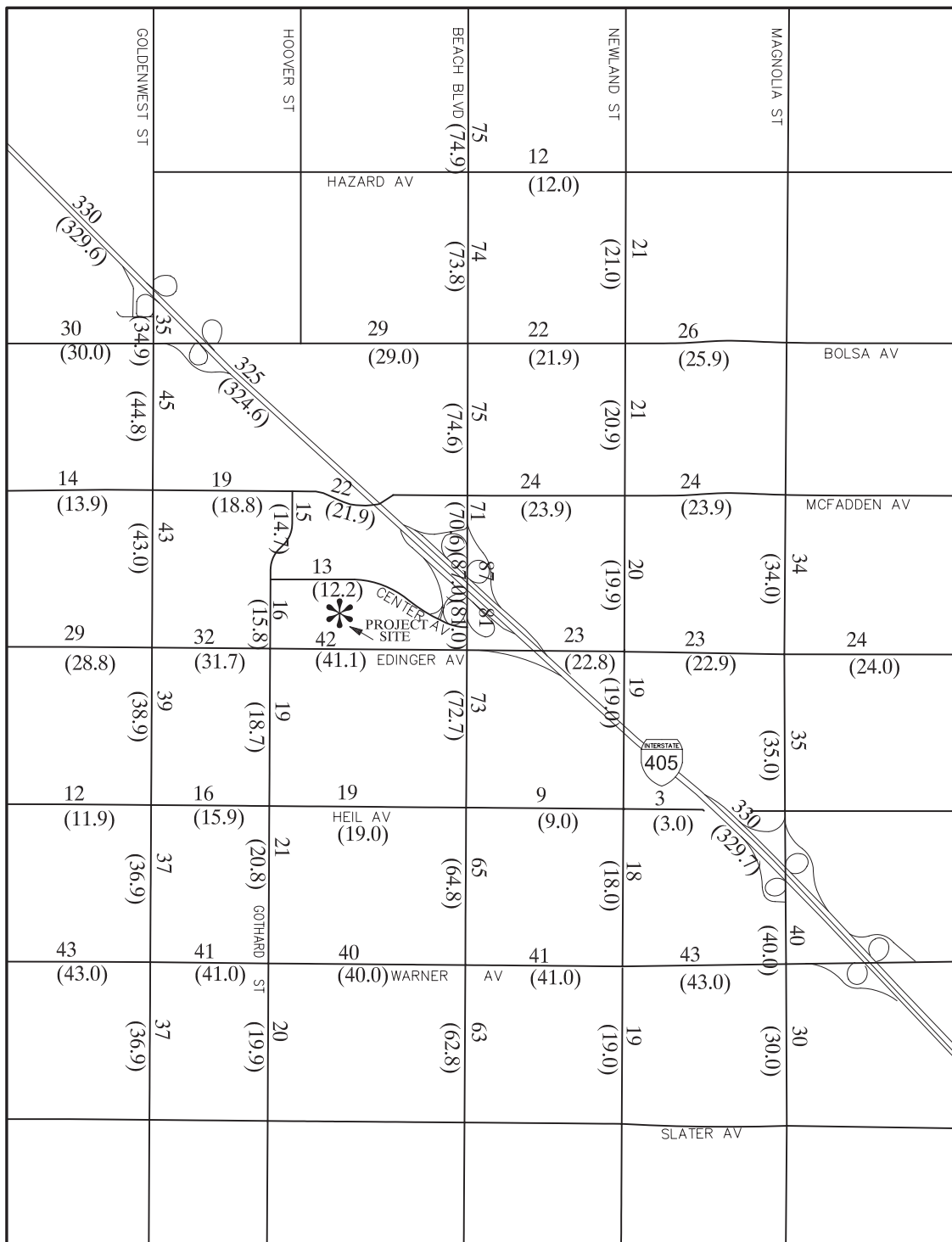
Location	Capacity	AM Peak Hour				PM Peak Hour			
		Total Volume	Total V/C	Project Volume	Project V/C*	Total Volume	Total V/C0	Project Volume	Project V/C*
Year 2014									
I-405/Beach Boulevard NB loop on-ramp (from NB Beach Boulevard)	900	1,327	.147	29	0.03	1,598	1.78	26	0.03
I-405/Beach Boulevard NB loop off-ramp (to SB Beach Boulevard)	1,200	784	.65	10	0.01	990	0.83	40	0.03
I-405/Beach Boulevard SB on-ramp at Center Avenue	1,800	463	.26	13	0.01	1,041	0.58	11	0.01
I-405/Beach Boulevard SB off-ramp at Center Avenue	1,500	1,009	.67	9	0.01	1,216	0.81	36	0.02
I-405/Edinger Avenue SB direct on-ramp	1,080	691	.64	19	0.02	710	0.66	17	0.02
Year 2030									
I-405/Beach Boulevard NB loop on-ramp (from NB Beach Boulevard)	900	1,439	1.60	29	0.03	1,706	1.90	26	0.03
I-405/Beach Boulevard NB loop off-ramp (to SB Beach Boulevard)	1,200	860	0.72	10	0.01	1,040	0.87	40	0.03
I-405/Beach Boulevard SB on-ramp at Center Avenue	1,800	632	0.35	13	0.01	1,181	0.66	11	0.01
I-405/Beach Boulevard SB off-ramp at Center Avenue	1,500	1,107	0.74	9	0.01	1,286	0.86	36	0.02
I-405/Edinger Avenue SB direct on-ramp	1,080	881	0.82	19	0.02	763	0.71	17	0.02

SOURCE: Austin-Foust, Inc. City of Huntington Beach Bella Terra Traffic Analysis. 2008.

Table 6-12 LOS Summary for Caltrans Intersections—Reduced Alternative

Location	2014				2030			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
I-405 SB Ramps at Center Avenue	33.0	C	38.5	D	31.3	C	45.9	D
Beach Boulevard at Center Avenue	16.3	B	18.7	B	19.9	B	21.4	C
Beach Boulevard at Edinger Avenue	65.4	E	58.0	E	61.6	E	67.3	E
Beach Boulevard at Heil Avenue	17.0	B	17.9	B	21.6	C	35.9	D
Beach Boulevard at Warner Avenue	34.1	C	53.2	D	38.0	D	62.1	E
Beach Boulevard at McFadden Avenue	31.2	C	40.2	D	40.6	D	54.3	D
Beach Boulevard at Bolsa Avenue	36.3	D	39.0	D	53.9	D	96.9	F
Beach Boulevard at Hazard Avenue	23.6	C	29.9	C	31.0	C	35.8	D

SOURCE: Austin-Foust, Inc. City of Huntington Beach Bella Terra Traffic Analysis. 2008.



Legend	
XX	General Plan ADT (000s)
(Y.Y)	With-Project ADT (000s)

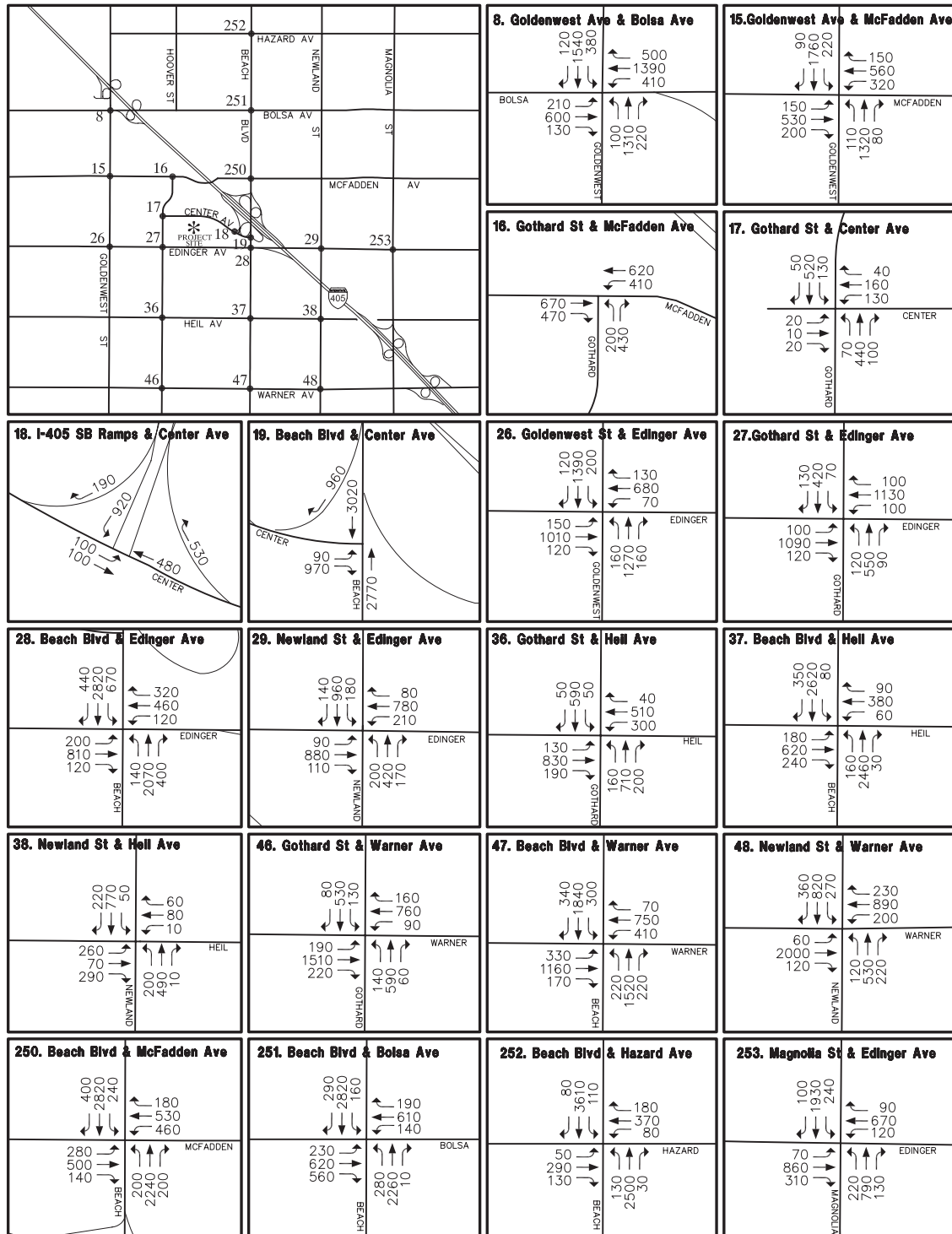


Source: Austin-Foust Associates, Inc., 2008.

FIGURE 6-6
Year 2030 ADT Volumes – Reduced Alternative

0D2138300

The Village at Bella Terra



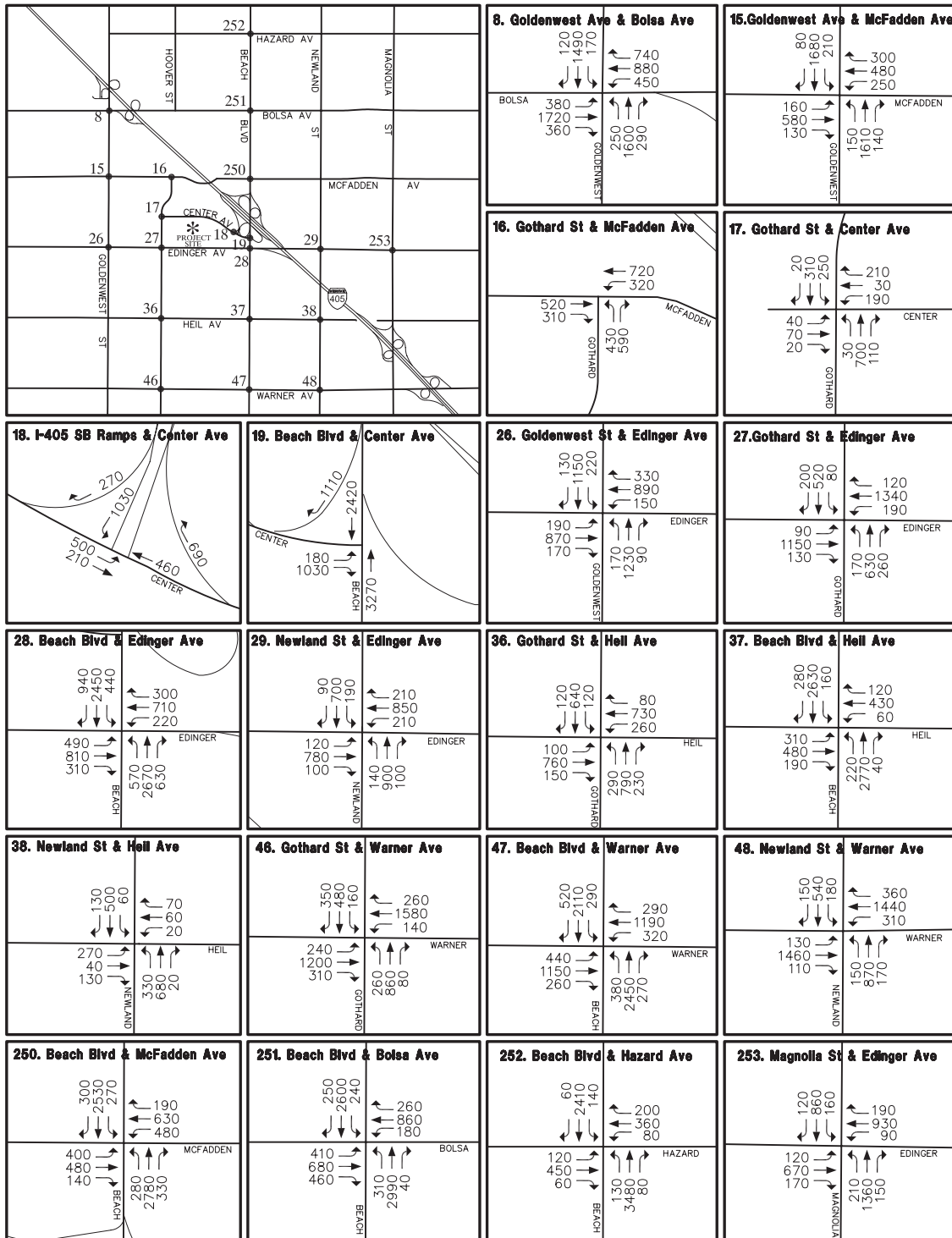
Source: Austin-Foust Associates, Inc., 2008.



FIGURE 6-7
Year 2030 AM Peak Hour Volumes – No Project

0D2138300

The Village at Bella Terra

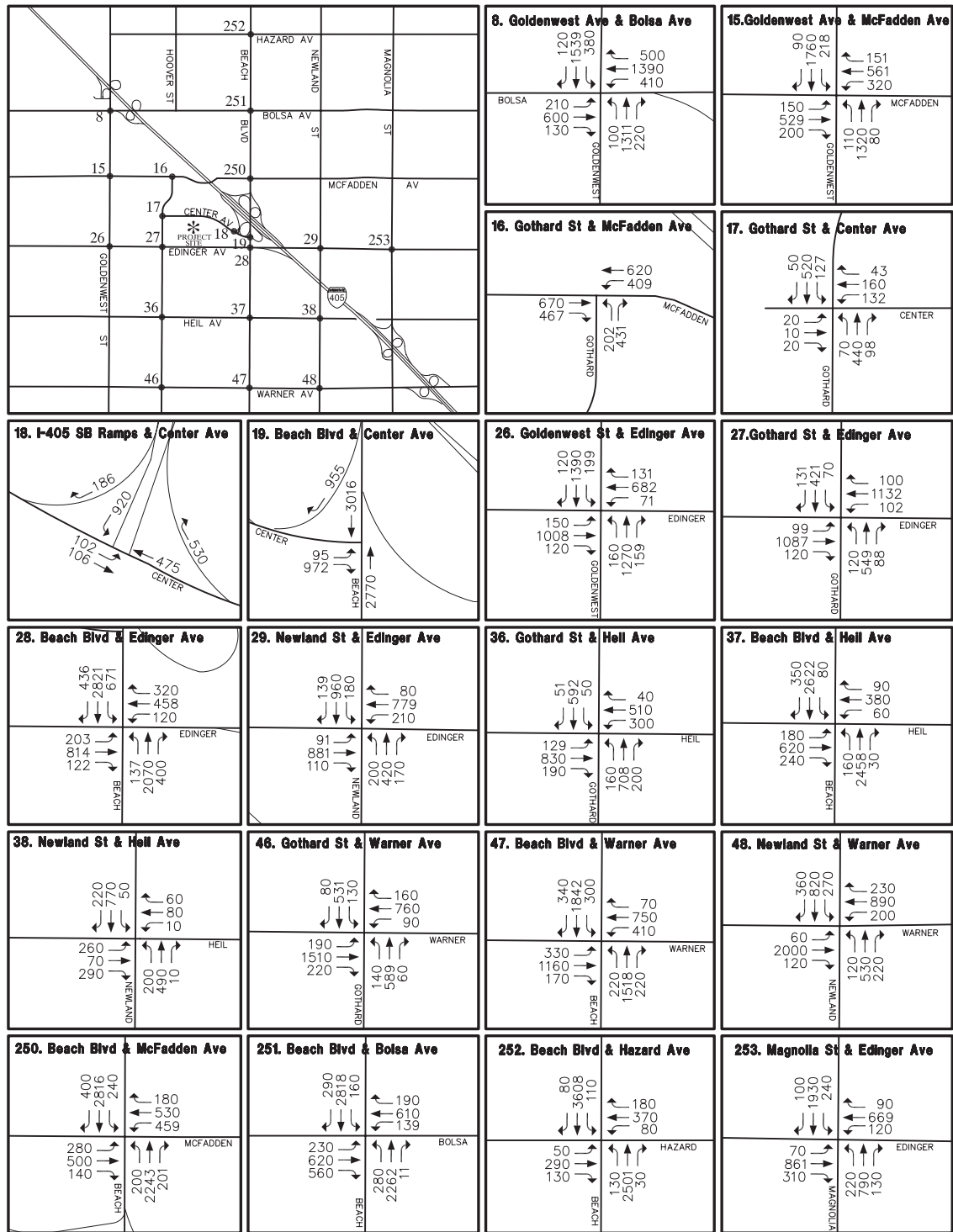


Source: Austin-Foust Associates, Inc., 2008.

FIGURE 6-8
Year 2030 PM Peak Hour Volumes – No Project

0D2138300

The Village at Bella Terra

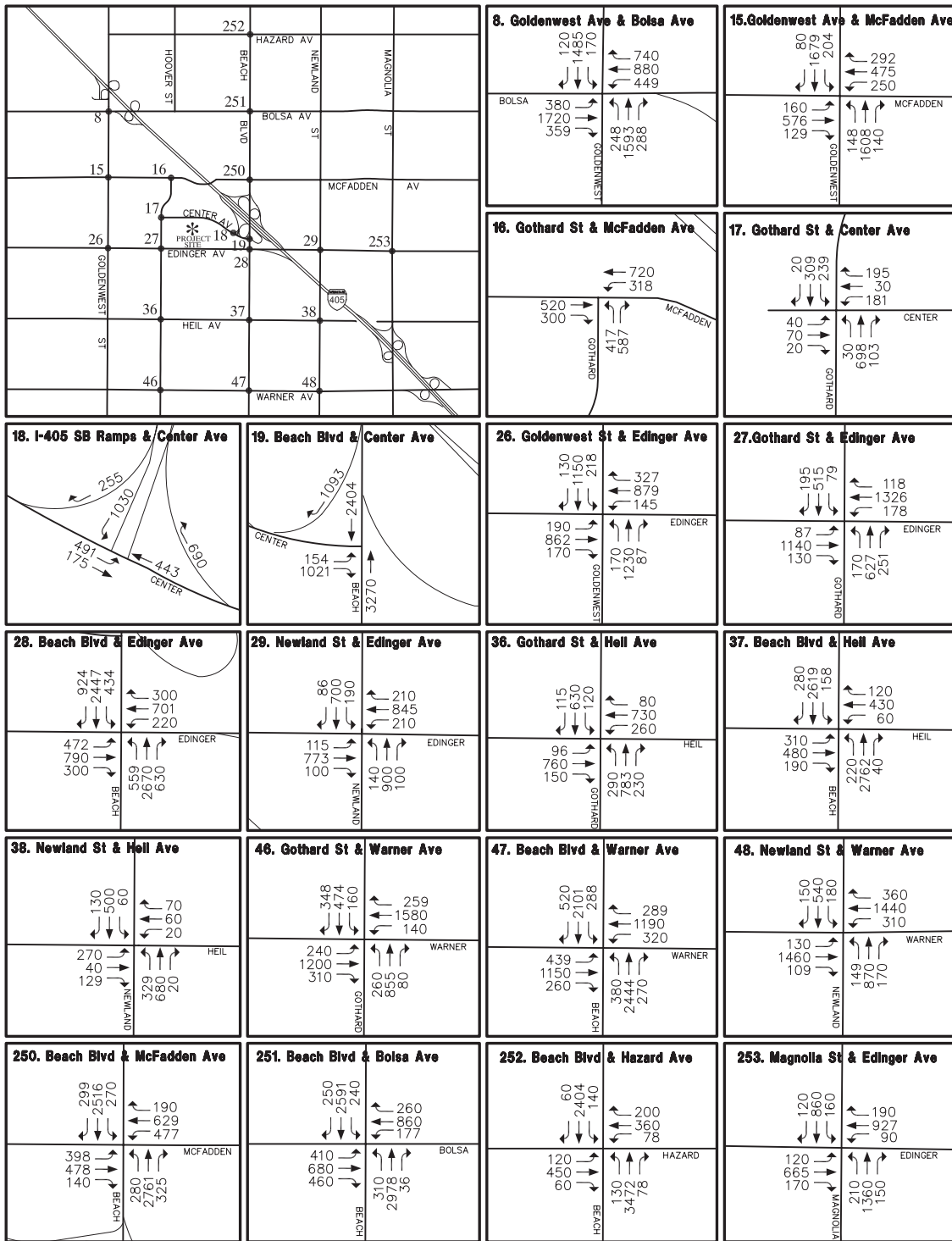


Source: Austin-Foust Associates, Inc., 2008.

FIGURE 6-9
Year 2030 AM Peak Hour Volumes – Reduced Alternative

0D2138300

The Village at Bella Terra



Source: Austin-Foust Associates, Inc., 2008.



FIGURE 6-10
Year 2030 PM Peak Hour Volumes – Reduced Alternative

0D2138300

The Village at Bella Terra

Construction of the reduced alternative is anticipated to occur over approximately 35 months beginning in January of 2009. Project construction is anticipated to consist of five phases: demolition, excavation and shoring, sub-grade construction, pile driving, and public improvements on Edinger Avenue and building construction, with building construction occurring over five additional phases. Demolition would involve the removal of an existing 190,100 sf retail building and an 18,600 sf auto repair building. The demolition phase is estimated to take three and a half months and would involve numerous truck trips to remove the existing building materials.

It is anticipated that construction activities could result in potential adverse impacts (similar to the proposed project), as demolition and grading activities would be considerable, and thus truck trips associated with materials, and soil/import export would occur. Construction traffic generally occurs prior to the peak period, consistent with the typical construction work day of 7:00 A.M. to 3:00 P.M. Further, several arterial roadways in the project vicinity are designated truck routes in the City's General Plan Circulation Element (Figure CE-7). Specifically, Edinger Avenue, Goldenwest Avenue, and Bolsa Avenue are designated truck routes and are easily accessible from the project site. Access to the I-405 freeway is available from Center Avenue, adjacent to and north. Easy access to State Freeways would eliminate truck traffic in the surrounding arterial streets. Truck trips could travel along designated truck routes north and south of the site to I-405 or south to Pacific Coast Highway. In addition, construction of the improvements to the intersection of Edinger Avenue and Beach Boulevard (see Mitigation Measure MM4.13-1) could cause delays along both roadways. However, these improvements would be handled by the City, and during construction of these public improvements, it is assumed that at least one lane in all directions would be open for the duration, similar to the proposed project. Due to the relatively minor number of truck trips associated with construction of the reduced alternative and due to the temporary nature of construction activities, truck trips due to import/export activities at the project site would not be anticipated to cause a substantial increase in traffic volumes and delays in the project area. Construction-related traffic impacts would, therefore, be less than significant.

As shown in Table 6-8, the reduced alternative is projected to generate a total of approximately 4,853 average trips per day. In the AM peak hour the project is projected to generate approximately 279 vehicles per hour, while PM peak hour trip generation is estimated at approximately 462 vehicles per hour.

Operation of the reduced alternative under 2014 conditions would not result in an increase in traffic beyond existing conditions. A project impact is defined as a change in ICU of 0.01 or greater, where deficient traffic operations are projected to occur (i.e., LOS E or F). As indicated in Table 6-9 three intersections are projected to operate at LOS E during the PM peak hours. However, as this table shows, these three intersections (Goldenwest Avenue and Bolsa Avenue, Beach Boulevard and Edinger Avenue, and Beach Boulevard and Warner Avenue) are anticipated to operate at LOS E with or without the reduced alternative.

For the intersections that are projected to operate at LOS E, it was determined that only the intersection of Beach Boulevard and Edinger Avenue would result in an ICU increase of 0.01 or more. For this intersection, the ICU would increase from 0.92 under 2014 no-project conditions to 0.94 under 2014

with-project conditions. The other two intersections identified as operating at LOS E in 2014 showed no change between no-project and with-project conditions.

Therefore, the reduced alternative could result in a potentially significant impact with respect to 2014 traffic conditions at Beach Boulevard and Edinger Avenue. However, mitigation measure MM4.13-1, identified for the proposed project, would apply to the reduced alternative. The measure would require the Applicant to contribute a fair-share payment to add an additional northbound or westbound lane to the intersection. As identified for the proposed project, either improvement to the intersection of Beach Boulevard and Edinger Avenue identified by MM4.13-1 would reduce the potentially significant impact associated with impacts to intersections to a less-than-significant level. However, this alternative would contribute traffic to projected deficiencies on I-405 (in both 2014 and 2030), similar to proposed project although to a lesser degree. In the absence of specific significance criteria from Caltrans, the addition of traffic to a projected deficiency is considered significant and unavoidable.

Operation of the reduced alternative under 2030 conditions would result in seven intersections operating at an unacceptable LOS, similar to the proposed project. These intersections include the following:

- Goldenwest Avenue at Bolsa Avenue (LOS F, no-project/with-project)
- Beach Boulevard at Edinger Avenue (LOS F, no-project/with-project)
- Beach Boulevard at Heil Avenue (LOS E, no-project/with-project)
- Beach Boulevard at Warner Avenue (LOS E, no-project/with-project)
- Newland Street at Warner Avenue (LOS E, no-project/with-project)
- Beach Boulevard at McFadden Avenue (LOS E, no-project/with-project)
- Beach Boulevard at Bolsa Avenue (LOS F, no-project/with-project)

The reduced alternative, as identified in the traffic study for the proposed project, would result in lower ICU values when compared to either the proposed project or the no-project conditions (General Plan). For the intersections at LOS E or F, a determination was made as to whether the project contribution amounted to one percent or more in accordance with the performance criteria for significant project impacts. This was carried out by summing the project traffic ICU contribution to each critical movement in the ICU calculation, and the results are shown in Table 6-13 (refer to the traffic study, Appendix H).

Table 6-13 ICU Contribution (2030)—Reduced Alternative		
<i>Location</i>	<i>AM/PM</i>	<i>Project ICU</i>
Goldenwest Street and Bolsa Avenue	PM	0.26%
Beach Boulevard and Edinger Avenue	PM	1.34%
Beach Boulevard and Heil Avenue	PM	0.21%
Beach Boulevard and Warner Avenue	PM	0.38%
Beach Boulevard and McFadden Avenue	AM	0.24%
Beach Boulevard and McFadden Avenue	PM	0.63%
Beach Boulevard and Bolsa Avenue	AM	0.07%
Beach Boulevard and Bolsa Avenue	PM	0.24%

SOURCE: Austin-Foust, Inc. City of Huntington Beach Bella Terra Traffic Analysis. 2008.

As shown in Table 6-13, the reduced alternative would have a long-range (2030) significant impact at the intersection of Beach Boulevard and Edinger Avenue during the PM peak hour. The intersection would operate with implementation of the reduced alternative at LOS F (ICU 1.05) during the PM peak hour. When looking at the intersections' overall contribution to traffic in the study area, the reduced alternative would result in a Project ICU of 1.34 percent during the PM peak hour. As this is greater than a one percent increase, this intersection would result in a significant impact.

In order to reduce this impact to a less-than-significant level, the Applicant would be required to adhere to the improvements identified in mitigation measure MM4.13-1 (identified for the proposed project and applied to the reduced alternative). Since both the short-range and long-range impacts are cumulative (that is, the project contributes to but does not cause the deficiency), the identified mitigation measure would occur on a fair share basis (refer to Appendix H for calculations).

Through implementation of MM4.13-1, which would involve the construction of an additional northbound thru lane along Beach Boulevard at Edinger Avenue or an additional westbound thru lane on Edinger Avenue at Beach Boulevard, the long-term (2030) traffic impacts generated by operation of the reduced project would be less than significant, similar to the proposed project. However, this reduced alternative would contribute to future deficiencies on the I-405. Since there are no significance criteria for these facilities, this impact is considered significant. Mitigation measures would involve major regional improvements such as widening the freeway that are currently under evaluation as part of a Project Study Report/Project Development Support for the I-405 Freeway. However, the regional improvements are not currently funded at this time and are not feasible as part of the reduced alternative. Therefore, the addition of traffic (albeit less than the proposed project) to a projected deficiency on the I-405 in 2030 is considered significant and unavoidable.

The Orange County Transportation Authority is designated as the Congestion Management Agency (CMA) to oversee the Orange County Congestion Management Plan (CMP). Two CMP intersections are located in the study area: 1) Beach Boulevard at Edinger Avenue, and 2) Beach Boulevard at Warner Avenue. CMP-designated intersections have a performance standard of LOS E or better (intersection capacity utilization (ICU) not to exceed 1.00), and a project is considered to have a significant impact if it contributes 0.01 or more to an ICU when the performance standard is exceeded. As identified on page 5-8 of the Traffic Study, 2014 ICU values for the reduced alternative show ICU values of 0.74 and 0.94 (AM and PM peak hours, respectively) for the intersection of Beach Boulevard and Edinger Avenue, and ICU values of 0.72 and 0.92 (AM and PM peak hours, respectively) for the intersection of Beach Boulevard and Warner Avenue. Neither CMP intersection shows ICU values that exceed the allowable CMP threshold of 1.00. Therefore, the reduced alternative would not result in CMP impacts. This impact would be less than significant, similar to the proposed project.

The project site for the reduced alternative is not located within two miles of a public or private use airport. The project site is not located within any airport land use plan and is not located within the flight path of the John Wayne Airport, the Joint Force Training Base at Los Alamitos, or the Fullerton Municipal Airport. Further, the reduced alternative would not result in a change to air traffic patterns in

the City. Therefore, the reduced alternative would not be anticipated to result in changes to air traffic patterns. This impact would be less than significant.

For the purposes of this analysis, hazards are defined as changes to circulation patterns that could result in unsafe driving or pedestrian conditions. Examples include inadequate vision or stopping distance, sharp roadway curves where there is an inability to see oncoming traffic, or vehicular/pedestrian traffic conflicts. The reduced alternative, similar to the proposed project, would not substantially increase hazards due to design features or incompatible uses. The reduced alternative would result in a mixed-use development in an area currently developed for commercial uses. The alternative would not introduce design features incompatible with current circulation patterns. Access to the project site would be provided along Edinger Avenue and Center Avenue, similar to the proposed project. Internal access within the project site would be provided by two lanes, with one lane traversing the site from east to west and another lane traversing the western border of the site from north to south. The lane traversing the western border of the project site would also double as an emergency access lane. Project impacts are less-than-significant in regards to hazards resulting from design features or incompatible uses.

The potential for roadway hazards also occurs as an inherent result of the placement of additional access along public roadways as well as resulting from increased vehicle traffic at those access points. New intersections require adequate sight distance and intersection traffic control, to minimize potential hazards. In order to ensure safe construction of project intersections, CR4.13-1 and CR4.13-2, identified for the proposed project, would apply to the reduced alternative.

The project site would have four general access points. The signalized intersection on Center Avenue (Huntington Village Lane) is one of several access points serving existing Bella Terra traffic and it also serves the area to the north. The access point on Edinger Avenue also serves some existing Bella Terra traffic and provides access to a shopping center on the south side of Edinger Avenue. The nonsignalized location on Center Avenue is a tee-intersection but with minimal existing traffic volumes. Additionally, there would be a right in, right out access point at the southwest corner of the project site, along Edinger Avenue. These same access points have been assumed for the reduced project as well as the proposed project. Peak hour delays for exiting and entering vehicles would operate at acceptable levels based on calculated delay values using HCM methodology. Access points to the project site would not be considered a design hazard in regards to daily traffic operation of the intersection. Implementation of City code requirements would ensure impacts would be less than significant.

Access to the project site would be provided from Edinger Avenue and Center Avenue, both of which are primary arterial streets. An emergency access lane accessed from any of the identified access points would be located along the western boundary of the project site. As part of standard development procedures, plans would be submitted to the City for review and approval to ensure that all new development has adequate emergency access, including turning radius, in compliance with existing regulations. Therefore, a less-than-significant impact would occur after compliance with existing regulations. Therefore, project traffic would not impede emergency access to and from adjacent and surrounding roadways.

The reduced alternative would require a lower number of parking spaces than either option identified under the proposed project. The reduced alternative would result in 538 residential units and 138,085 sf of commercial development. As per Chapter 231 (Off-Street Parking and Loading Provisions) of the Huntington Beach Zoning and Subdivision Ordinance, adequate parking for the proposed development would be determined based on a shared parking study. As the reduced alternative would require significantly less parking spaces than compared to either of the proposed options, it is assumed that the reduced alternative would provide an adequate number of parking spaces for residents and patrons.

As discussed in more detail in the following paragraph, a primary objective of the reduced alternative, as well as the proposed project, is to promote alternative methods of transportation, specifically to promote an active pedestrian environment and the use of public transit. In consideration of the project site's close proximity to the OCTA transit center, Bella Terra regional shopping center, and the Goldenwest Community College, the potential exists that visitors and residents of the proposed development would not require parking spaces as they are utilizing other methods of transportation. Therefore, this impact is considered less than significant, and no mitigation is required.

As discussed above, project implementation is anticipated to be consistent with local policies related to transportation, including the City of Huntington Beach General Plan Land Use and Transportation Elements. The reduced alternative would be located adjacent to and west of the existing Bella Terra Regional Shopping Center, between Center Avenue and Edinger Avenue. Alternative modes of transportation are accessible for both patrons of the commercial uses within the project, as well as residents of the development. The OCTA operated Golden West Transit Center is located just west of the project site (within 600 feet) and provides a convenient location for residential trips to be made by transit. The Goldenwest Community College is situated directly west of Gothard Street and it is anticipated that patrons and residents of the development would walk or use other nonprivate vehicle modes (i.e., bicycle and transit) to travel in the general vicinity of the project. The walkability of the surrounding area, as well as the easy access to transit facilities would promote the use of mass transit and no-transit for residents and patrons alike.

In addition, the Golden West Transportation Center is the City's largest transit hub and serves six bus lines and provides transit access throughout northern Orange County. The location of the project in such close proximity to the transportation center hub would provide residents with a convenient means of alternative transportation. In addition, although not included as part of this analysis, the project could also benefit from future commuter rail service if it is established along the existing Union Pacific Railroad line.

This project would also be in conformance with Policy CE 6.1.6 of the Circulation Element of the City's General Plan, which requires new development to provide pedestrian walkways and bicycle routes between developments, schools, and public facilities. Due to project compatibility with adopted policies supporting alternative transportation, this impact would be less than significant for the reduced alternative.

Overall, impacts related to transportation and traffic would be similar to, although slightly less than those identified for the proposed project.

Utilities

Implementation of the reduced alternative would permit a maximum of 538 residential units and 138,085 sf of commercial uses. With approximately 15.85 acres associated with the development of the reduced alternative, the estimated water supply demand would be approximately 111,473 gpd. As the reduced alternative would require less overall water than either Option 1 or Option 2 under the proposed project, this impact is considered less than significant. For the purposes of this analysis, it is anticipated that the additional demand placed on either the Diemer Filtration Plant or the Jensen Filtration Plant would be approximately 25 percent of the total increase in water demand. If the reduced alternative's imported water demand were treated solely at either Filtration Plant, this increase would represent far less than 1 percent of the remaining capacities of both facilities. For the reasons discussed in Section 4.14, under Impact 4.14-1 of this EIR, the development of this reduced alternative would not directly result in the construction of new treatment facilities or expanded water treatment facilities. Therefore, this is considered a less-than-significant impact and no mitigation is required.

New development on the project site would increase demands for municipal water services by approximately 111,473 gpd. Although imported water supplies from the Delta are of significant concern, for the reasons discussed in Section 4.14, under Impact 4.14-2 of this EIR, the City would be able to provide a reliable source of water to accommodate its existing users and the additional demand on water supplies created by the implementation of the reduced alternative for the 20-year projection. Therefore this impact would be less than significant, similar to the proposed project. No mitigation measures are required.

The NPDES permit system requires that all existing and future municipal and industrial discharges to surface waters within the City be subject to specific discharge requirements. The reduced alternative would not result in the discharge of wastewater to any surface water. Instead, operational discharges will be sent to the project's sewer system, which would ultimately be treated at one or more of the OCSD wastewater treatment plants. The OCSD wastewater treatment plants are required to comply with their associated waste discharge requirements (WDRs). WDRs set the levels of pollutants allowable in water discharged from a facility.

Compliance with any applicable WDRs, as monitored and enforced by the OCSD, would ensure that the reduced alternative would not exceed the applicable wastewater treatment requirements of the SARWQCB with respect to discharges to the sewer system. This would result in a less-than-significant impact. No mitigation measures are required.

The reduced alternative would include the development of 538 residential units and 138,085 sf of commercial uses. As shown in Table 6-14 (Wastewater Generated from Reduced Alternative Project Buildout) below development of the reduced alternative would increase the amount of wastewater transported by the City's sewer system by approximately 167,223 gpd (0.17 mgd).

Payment of applicable fees under the Connection Fee Program is considered full mitigation under CEQA for potential impacts resulting from development of the reduced alternative. Therefore, this

impact is considered less than significant, similar to the proposed project. No mitigation measures are required.

Table 6-14 Wastewater Generated from Reduced Alternative Project Buildout

<i>Land use</i>	<i>Quantity</i>	<i>Duty Factor</i>	<i>Estimated Flow</i>
Reduced Alternative			
Condominiums	538	187 gpd/DU	100,606 gpd
Restaurants	30,000 sf	1.5 gpd/sf	45,000 gpd
Office	108,085 sf	0.2 gpd/sf	21,617 gpd
<i>Total</i>			167,223 gpd 0.17 mgd

SOURCE: City of Huntington Beach, The Village at Bella Terra PWQMP

For the reasons discussed in Section 4.14, under Impact 4.14-5 of this EIR, operation of future development under the reduced alternative would not be anticipated to result in significant environmental effects including, but not limited to, vectors or odors. Therefore, the project's impacts on environmental effects as a result of stormwater treatment control operations would be less than significant. No mitigation is required.

Wastewater Treatment Plant No. 2 has a capacity of approximately 168 mgd of wastewater, with a current flow of approximately 151 mgd. The reduced alternative's wastewater generation would be estimated at approximately 167,223 gpd (0.17 mgd), which would minimally increase the demand upon regional treatment facilities. The remaining capacity at Wastewater Treatment Plant No. 2 is approximately 24 mgd. As such, the treatment plant would have more than adequate capacity to treat the additional 0.17 mgd of wastewater that would be generated from development under this alternative. The proposed project would represent far less than 1 percent of the remaining capacity. For these reasons, the reduced alternative's impacts on wastewater treatment facilities are also considered less than significant. No mitigation measures are required.

The reduced alternative is estimated to produce approximately 2,951 lbs per day and approximately 1,077,115 lbs per year of solid waste for the implementation of reduced alternative. This translates to a generation rate of approximately 0.001 tons of solid waste per day and 0.0005 tons of solid waste per year for the implementation of reduced alternative. Assuming a worst-case scenario of 71 percent utilization of Rainbow Disposal's Transfer Station, the daily solid waste contribution to this transfer station would be less than 0.1 percent at approximately 0.0011 percent of its entire design capacity and the solid waste contribution of 0.001 ton per day to any of the three landfills from the reduced alternative is less than 1 percent of their allowed daily capacity. For the reasons discussed in Section 4.14, under Impact 4.14-7 of this EIR, the solid waste impacts resulting from implementation of the reduced alternative is considered less than significant. No mitigation is required.

The reduced alternative would result in the development of approximately 108,085 sf of commercial, 30,000 sf of restaurant and 538 units of residential uses. Based on the information provided in Table 6-15 (Projected Electricity Demands for Reduced Alternative), the total annual electricity consumption by

future development under the reduced alternative is estimated to be approximately 5,915,108.75 kWh/year.

Table 6-15 Projected Electricity Demands for Reduced Alternative			
Land Use	Electricity Demand Rates	Specific Plan Buildout	
		Size	Demand Rates
Reduced Alternative			
Commercial	13.55 kWh/sf/yr	108,085 sf	1,464,551.75 kWh/year
Restaurant	47.45 kWh/sf/r	30,000 sf	1,423,500 kWh/year
Residential	5,626.50 kWh/unit/yr	538 units	3027057 kWh/year
Total			5,915,108.75 kWh/year
SOURCE: SCAQMD CEQA Air Quality Handbook, 1993 kWh = kilowatt-hour; sf = square feet			

For the reasons discussed in Section 4.14, under Impact 4.14-8 of this EIR, electricity demand generated by the reduced alternative would be supplied without the need for additional construction or expansion of energy facilities beyond that which was previously planned. Therefore, this impact would be less than significant, and no mitigation is required.

As shown below in Table 6-16 (Projected Natural Gas Demand for Reduced Alternative) the project-generated demand for natural gas would be approximately 78,545,598 cf/year. For the reasons discussed in Section 4.14, under Impact 4.14-8 of this EIR, the natural gas demand projected for the reduced alternative would not exceed available or planned supply, new infrastructure would not be required to serve the project site. Therefore, this impact would be less than significant, and no mitigation is required.

Table 6-16 Projected Natural Gas Demand for Reduced Alternative			
Land Use	Electricity Demand Rates	Specific Plan Buildout	
		Size	Demand Rates
Reduced Alternative			
Commercial	34.8 cf/sf/year	108,085 sf	3,761,358 cf/year
Restaurant	1,058.5 cf/sf/year	30,000 sf	31,755,000 cf/year
Residential	79,980 cf/unit/year	538 units	43,029,240 cf/year
Total			78,545,598 cf/year
SOURCE: SCAQMD CEQA Air Quality Handbook, 1993 cf = cubic feet; sf = square feet			

Similar to the proposed project, all utilities impacts under the reduced alternative would be less than significant. However, because a reduction in overall resource consumption would occur under the reduced alternative, the impacts would occur to a lesser degree as compared to the project.

■ Attainment of Project Objectives

Implementation of Alternative 3 would satisfy all of the identified project objectives. Under this alternative, 583 residential units and 138,085 sf of commercial space would be developed on the project site. This would satisfy all objectives relating to developing dense residential uses within close proximity to transit, schools, and regional activities while offering close proximity to retail opportunities.

Although the Alternative would fulfill the project objectives identified for the proposed project, it would not reduce significant impacts identified for the proposed project to less-than-significant levels.

6.4 COMPARISON OF ALTERNATIVES

Table 6-17 (Comparison of Alternatives to the Proposed Project) provides a summary of the comparison of alternatives to the proposed project.

Table 6-17 Comparison of Alternatives to the Proposed Project			
<i>Environmental Issue Area</i>	<i>No Project/No Development</i>	<i>No Project/Reasonably Foreseeable Development under the Current General Plan</i>	<i>Reduced GPA Alternative</i>
Aesthetics	–	=	=
Air Quality	–	=	–
Cultural Resources	–	=	=
Geology and Soils	–	=	=
Hazards and Hazardous Materials	–	=	=
Hydrology and Water Quality	–	=	=
Land Use	–	–	=
Noise	–	=	=
Population and Housing	–	–	–/=
Public Services	–	=	=
Recreation	–	=	=
Transportation	–	+	–
Utilities	–	=	–

(–) = Impacts considered to be less when compared with the proposed project.

(+) = Impacts considered to be greater when compared with the proposed project.

(=) = Impacts considered to be equal or similar to the proposed project.

6.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The No Project/No Development Alternative would be environmentally superior to the proposed project on the basis of the minimization or avoidance of physical environmental impacts. However, the CEQA Guidelines require that if the environmentally superior alternative is the No Project Alternative,

“the EIR shall also identify an environmentally superior alternative among the other alternatives” (15126.6[e][2]). Therefore, the reduced GPA alternative would be considered the environmentally superior alternative, as summarized above in Table 6-17.

6.6 REFERENCES

- Austin-Foust Associates, Inc. 2008. *City of Huntington Beach—The Village at Bella Terra Traffic Study*, July.
- Broeren, Mary Beth. 2008. Phone conversation with Huntington Beach Planning Department. May 12.

